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The Basic Principles of Therapeutics

THE science of therapeutics has received little attention until of late, and its study is difficult from the innumerable collection of agents it possesses as well as from the imperfections of all the proposed methods of classifying them. But this study may be facilitated if we begin with a few of the basic principles, those that govern the vast majority of cases where therapeutic applications are required. Among these we would rank those relating to the treatment of autotoxemia, to elimination, infection, nutrition, vasomotor imbalance, insomnia, pain, and the maintenance of vitality.

Autotoxemia comes first in relative importance, because of its all-pervading influence and the constancy with which its effects are presented in nearly every case of disease or ill-health we meet. The recognition of this one factor in disease is a masterkey that opens many of the obscure places obtruding in the work of the doctor of medicine. Let this fact be known, and the evidences of its presence be rendered familiar, and the practician has a mastery over his cases which nothing else can give him.

Metchnikoff is right. The colon is a relic, and the manifold ills that take their origin therein are ill compensated by its function of acting as a receptacle for permitting one to retain nutritional residuum until a convenient time for disposing of it. By the time the fecal mass has reached the colon, the antiseptic action of the gastric juice has been exhausted, the absorption of nutritive elements has been completed, and there remains merely a collection of food residues, eliminative matters, and bacteria of innumerable varieties. We see then a mass of nitrogenous matters, putrescible, presenting these to the bacteria, together with the requisite warmth and moisture, and no safeguard of nature to restrain them. The free generation of toxins clearly is unavoidable under such conditions.

Why are not, then, the evils resulting from this condition constantly manifested upon all human beings? In reply to this, we might say that the harm is prevented by such regular evacuations that the fecal mass is not permitted to remain in the bowel more than twenty-four hours; and that to a reasonable degree we acquire immunity against any deleterious influence. But more nearly correct would be the retort that the evils *are* constantly being manifested.

Most intelligent mothers learn to associate the little sins of children—tempers, contrariness, and outbursts of passion—with abnormal conditions in the bowels. Many wives do the same with their men. Jennie Welsh Carlyle, on being complimented upon the fine address made by her husband the preceding evening, remarked that it would have been different had she neglected to give him his pill. But most men and women go through life under the influence of toxins, poisons absorbed from their own colons, and never suspect what makes them pessimistic, dull, unhappy, taking from them the keen enjoyment of life, paralyzing their efforts with a constantly iterated "what's the use?", and keeping them, not ill, but never well.

Is Metchnikoff further right in attributing old age to this cause?

I took a group of elderly men and put each upon a regimen that provided an absolutely complete evacuation of the large bowel once every twenty-four hours. Soon people began to take notice of these men—their clear eyes, fresh complexions, alert mentality, springy step and quick movements, surprising in men of their age. With this came the constant remark of how young they seemed for their age. Good humor and happiness dwelt on their brows. Swift decision and confidence characterized their business operations, as youthful buoyancy accompanied the wisdom of age. They actually seemed to be growing younger. This has continued for several years without any sign of diminution or reaction.

My recognition of the effects of fecal toxemia as an etiologic factor in chronic disease came originally from a remark of Lauder Brunton, to the effect that the cause of locomotor ataxia and other chronic affections of the spinal cord would eventually be found to be the absorption of toxins from the alimentary canal. Chronic inflammations are not inflammations, but degenerations. It is obvious that the causal principles must be conveyed to the affected tissues by the circulation. Given a blood stream constantly contaminated by a taint of fecal poisons, and we have the requisite influence to set up a slow but progressive degenerative process. Apply this to every part, organ and tissue of the body, and we have before us the causation of chronic disease.

The question of why, when this impure blood is furnished to every part of the body, the evil effects should be manifested in one place rather than any other is readily answered:

There is in every human being some one place less perfectly protected than the rest—the *locus resistentiæ minoris*. Here the evil influence will first be manifested, and local disease results. In time other organs should fall under the same debilitant process, and this is in accordance with clinical observation.

The incidence of acute disease is likewise deducible from our hypothesis. Every part of our bodies is subject to the constant assaults of innumerable microorganisms. Given a weakening by the fecal strain in the blood, and either an especially virulent swarm of microbes or a local weakness from trauma or other debilitating accident, and acute local disease is developed. Such an attack shows that the defensive forces of the body have for the time failed, and the invaders have effected a lodgment in the fortifications.

In febrile maladies the role played by fecal toxemia is even more important. The enormous radiation of water from the body leaves the blood so concentrated that it avidly absorbs fluids from every available source. The fluids of the feces with their contained toxins are thus taken into the circulation at a greatly accelerated rate, and fecal toxemia, therefore, forms an integral factor of every fever. The increased heat and the general weakening of the defensive forces of the body, sometimes with the presence of especially virulent microorganisms in the bowels, occasions the development of toxins more pernicious than in health. Hence the complete and repeated emptying of the alimentary canal and the use of intestinal antiseptics form an essential part of the rational routine treatment of all febrile attacks, without reference to the character of the specific disease or its cause.

Coming finally to those maladies in which the alimentary canal is invaded by specific organisms that reproduce there, few, if any, deny the role to be played by the method herein advocated. In the cholera group, in typhoid fever and dysentery, the alimentary canal forms the battle-ground where we may meet the enemy face to face. Empty the bowel and disinfect—"clean out, clear up, and keep clean." Calomel or podophyllotoxin, dear old epsom in its modern and perfected form as an effervescent draught, and the sulphocarbolates are responsible for saving many a valued life.

To any and all objections that may be urged against the hypothesis here presented, we have the one only reply—Try it for yourself. Try it, not with too ready assent or blind confidence, nor yet with the settled determination to find it fail; but with a mind free from prejudice and open to conviction, ready to welcome anything that may aid in our great work, but demanding that it shall be really an aid and not the hasty conclusion of a rash enthusiast.

How best accomplish this object?

Man is born to trouble as the sparks to fly upward. So, nearly everybody assumes that all the need is to give a cathartic, and if the patient says it acts let it go at that.

The matter is far more difficult. I have spent three weeks, trying to empty a woman's bowels, before succeeding as I wished. Usually men give a decigram of calomel and half this of podophyllin, every hour for six doses, and follow with a laxative saline. I do not like podophyllin—it is too gripy. Podophyllotoxin is much better, in half the dose.

Calomel is usually preferable, as it acts quicker and with less distress—none at all, in fact. But in all cases it should be accompanied by colonic flushing with warm soda solutions, repeated every eight hours as long as the stools come away dark or offensive. Old-fashioned folk may take castor oil or senna in full doses.

After the bowel has been cleared it is easy to keep it so with the saline laxatives alone. One may detect fecal masses in the abdomen by massage, but this takes practice—it is often singularly difficult.

The next article of this series is to be devoted to elimination.

While others wake 'tis ours to dream—
Let us be glad for dreaming.
For present cloud and coming gleam,
For shadow and for seeming.
For dreaming of the pleasant ways
With joy to lend or borrow—
Be glad for cherished yesterdays,
Be thankful for tomorrow.

—W. D. Nesbit.

THE PROSPERITY OF THE PHYSICIAN

Mr. Clough, our advertising manager, has been conducting an interesting investigation among the readers of this journal, in order to get some idea of their various degrees of prosperity, and also to ascertain, as far as possible, in how large a degree CLINICAL MEDICINE is serving their needs, both through its reading and advertising pages.

In pursuance of this idea, Mr. Clough sent out to subscribers 1000 letters, taking at random from our list the names of 25 physicians from each of 40 different states; and he received 651 replies. In his letters he asked a series of questions intended to elicit the opinions of each recipient upon a variety of subjects, as well as to secure information concerning the financial status of those replying. It is not necessary to reproduce all the questions, some of them being of interest mainly to advertisers, but here are a few of them, together with the answers received.

To the question, Do you own your own home? 657 physicians replied yes, and 81, no.

We learn that 311 physicians of those voting own automobiles, while 326 do not; 213 of the latter are contemplating the purchase of cars.

When asked whether they read the advertising pages of CLINICAL MEDICINE, 625 answered yes, and only 15, no; 529 stated that they purchase things advertised in the journal, while 101 do not.

When asked whether pure foods should be advertised in medical journals, 589 replied yes, and 39, no. The vote was about the same upon the advertising of automobiles and accessories, roofing material, and hygienic devices for the home.

In answer to the question as to how many medical journals they read, 17 said one; 57, two; 94, three; 151, four; 133, five; 90, six; 19, seven; 26, eight; 22, more than eight, and 75, "several." The average is between four and five.

When asked what two journals they considered the best, THE AMERICAN JOURNAL OF CLINICAL MEDICINE was mentioned by 512; *The Medical World* was mentioned by 123; *The Journal of the American Medical Association*, by 118; *The Medical Council*, by 36; *Ellingwood's Therapeutist*, by 25; while 48 other journals were mentioned by from 1 to 15 physicians each.

You may draw what conclusions you like from these votes. One thing is certain, namely, that the readers of CLINICAL MEDICINE—whatever may be the status of other physicians—are *not* a poverty-stricken lot. With 87 percent living in their own homes, nearly 50 percent flying around the country in their own motor cars—and 33 percent of the remainder in the market for automobiles, needing but the persuasive "touch" of the skilful salesman to purchase one—it is not difficult to see why it is difficult to get up a discussion in THE CLINIC regarding "the poverty of the American doctor."

Another point that sticks out is the intense interest shown in the advertising pages. by the majority of our readers. And this is as it should be. Every forward step in medicine is proclaimed first, and with greatest detail, by the advertiser. New remedies, new apparatus, surgical instruments, office and hospital accessories, dispensing conveniences, the driving outfit, the automobile and its equipment, furniture for the home, conveniences for the care of the sick—everything, in fact, that the physician can use to good advantage—should be mentioned in the advertising pages of the up-to-date medical journal.

Such a periodical should be a veritable "cyclopedia" of the physician's requirements—personal no less than medical—so that he can turn to it with confidence and satisfaction when he contemplates making a purchase. It is such a cyclopedia that we are trying to make of CLINICAL MEDICINE, and we appreciate the thoughtful cooperation, to

that end, of our subscribers. Keep on reading the advertisements, by all means.

The vote on "the best medical journals" naturally pleased us. That 80 percent think our journal the best of its kind is enough to make any editor proud—especially when he stops to consider how many fine, able, scientific, brilliantly edited journals, counting among their contributors the best in the land, we have to compete with.

We are determined to go forward, but to do so we need the help of every reader—*your* help. Make it a personal matter—what can *you* do to increase THE CLINIC'S interest and value? There is not a single doctor who reads this line who could not, if he would, give us one brief, pointed, practical, boiled-down real "alkaloid" of therapeutic helpfulness.

Now—those of you who love us, give us those brief practical reports. Those of you (the very few) who criticize, send us just the kind of paper (brief, helpful—cold water and hot air all squeezed out) that you think we should print!

Let's all take hold to build—to make CLINICAL MEDICINE better, and still better. Everybody, please!

Be as charitable as you can toward those who see things not as you see them. For maybe you are wrong. It is possible.—Stevens, Eclectic Medical Review.

ANTITYPHOID VACCINATION

Louis and Combe, assistants to Vincent at the Laboratory for Antityphoid Vaccination at Val-de-Grace, publish, in *Le Monde Médical* for December 5, 1912, an interesting account of the work done there. Their conclusions are drawn from an experience of more than 8000 vaccinations.

Antityphoid vaccination should be advised for persons living in localities where the drinking water is doubtful, ill supervised or exposed to contamination; for those compelled to travel or sojourn in places where typhoid fever is endemic; especially great cities, towns of the south, and the colonies. Its use is advisable in families of typhoid patients, if not negatized; also in those of former patients who may be carriers. It is, of course, urged in the army, navy, and colonial service.

The indications are numerous and varied. The perfect benignity of the method, the extreme facility of its application, the very simple technic, at the disposal of every practician, recommend it strongly. It may be done at any age liable to fever, even in infants of three years or more, who bear it well.

Antityphoid vaccination can not and must not be applied except to healthy persons, giving this term its strictest acceptance. All acute infectious diseases, of every sort, contraindicate its use. Most progressive chronic affections are equally contraindications.

Attention should be especially directed to the avoidance of vaccinating the tuberculous, who after the vaccination present general reactions, with fever lasting several days. This is similar to that following tuberculin. An abnormal reaction following antityphoid vaccination in a subject deemed healthy, if he has not had typhoid fever previously, should arouse the suspicion of tuberculosis. In case of an old tuberculosis, long since cured, use the vaccine only when necessary.

Persons suffering from malaria may take the vaccine during the intervals only, with a Gram of quinine hydrochloride between each two, some hours before the expected paroxysm. Failing this precaution, the injection of vaccine at the beginning of a chill, during fatigue or traumatism may arouse a slumbering paludism and occasion a paroxysm.

Syphilitics, not enfeebled, may be vaccinated, provided they present no accidents in evolution. It is necessary to deny this vaccination to persons whose general health is seriously impaired, to cardiacs, nephritics, diabetics, to the subjects of mucomembranous enteritis.

With the female, the series of injections should be interrupted by menstruation and resumed later. Finally, with subjects debilitated, overworked, fatigued, enduring mental strain, the vaccination should be postponed until their condition is satisfactory.

Injections of the bacterin can be practiced without fear during an epidemic, if the patient presents none of the prodromes of typhoid fever. Besides, if the subject is already infected with typhoid germs, the injections will do no harm, and even seem to have a favorable influence over the development of the disease.

Should one vaccinate those already attacked with the disease? To answer affirmatively, would be to deny the principle of vaccination; but a previous attack does not confer absolute immunity, for this attenuates progressively and finally disappears. Its duration seems to be at least two years. After this period revaccination is advisable.

The site of injection is the back of the left shoulder (the right in left-handed persons),

on a line prolonging the internal border of the arm, two fingers' breadth above the axillary fold, behind the posterior border of the deltoid muscle. This region, poor in nervous filaments, has a loose cellular tissue that absorbs easily the subcutaneous injections. The prick of the skin is scarcely felt, the local reaction insignificant, and the subsequent pain is *nil*, unless aroused by extensive movements of the upper arm.

The field is disinfected by painting with tincture of iodine; the ampule is well shaken, to render the emulsion homogeneous; before breaking the neck of the ampule paint it with iodine. Do not apply heat, as this may impair the vaccine. Let the iodine dry and then snap the neck of the ampule. Take the syringe, sterilized and cooled, affix the needle and draw in the dose designed.

The same vaccine is used for children, the doses being reduced. At between three and eleven years inject half the adult doses; at from eleven to fifteen years, two-thirds that amount.

The syringe being charged, bury it under the skin in the subcutaneous tissue; not in the skin, the muscle or under the aponeurosis, for fear of local reaction. The liquid should be injected slowly, the needle withdrawn, and a drop of iodine applied over the puncture. Do not massage the place of injection, or the fluid may be absorbed too rapidly. All active movement of the arm should be avoided for several hours, for the same reason.

When many persons are to be vaccinated at one time, then for each use a needle sterilized anew by boiling, and a syringe rinsed many times in boiling water and cooled before using. Often, in fact, a little blood flows back into the syringe at the moment of injection and exposes the next subject to the possibility of infection. With two syringes, it is easy to proceed with vaccinations collectively.

The injections are made every seven days; in case of need, there is no trouble in prolonging the intervals to ten days. The vaccination need not interrupt the ordinary work, the following simple precautions being observed:

1. On the day of each injection abstain from all fatigue or excess (late hours, copious repasts, alcohol).

2. Instruct the patient that he is not to consider himself vaccinated until he has received the whole series of (three) immunizing injections, and for six days thereafter.

3. Warn him of the slight reaction that will follow each injection at the end of about three hours: local reaction, swelling, slight tenderness, especially aroused by movements of the arm, a sense of bruise, of a blow on the point of the shoulder, these disappearing by the next day.

4. Prescribe, if he feels headache or slight fever, some mild antipyretic, such as acetanilid. Ordinarily the present writer would prefer a few doses of aconitine to quiet any febrile reaction.

The best hour for the injections is from 4 to 6 p. m. Reactions then pass during sleep; this is an advantage, especially with neuropaths.

The whole operation is as simple as an injection of morphine.

The following observations, made by Louis and Combe, are worthy of consideration:

1. If during the series the patient contracts any intercurrent affection, however slight, the vaccination should be immediately suspended. It should be resumed only after the complete disappearance of the symptoms, one or two weeks later, when health has been completely established and convalescence ended. On recommencing, repeat the last dose preceding.

2. The incubation of typhoid fever being fifteen to twenty days, during an epidemic some must receive the injections during the incubation period. The attack will occur, but the injections received may favorably influence the course, attenuating its gravity and its duration, by the partial immunity established.

3. Infection may occur during the vaccination period, the course being likewise benign.

4. If a person believing himself infected with typhoid fever applies for vaccination, it may be done without fear if he presents no morbid phenomena. Even the primary injection may abort the attack. Vincent has made many observations on bacteriologists, who, accidentally contaminated in their laboratory work, have been totally protected against typhoid fever by an immediate vaccination.

5. The site of injection may present an induration, unimportant, persisting many days, even a week. Nevertheless the other injections are made in the same vicinity.

6. The three injections are made on the same side.

It would be premature to fix the duration of immunity, but the minimum is given by the writers as two and one-half years. This agrees with the observations of Russell, in the United States Army. Analogy would

indicate its persistence for five to seven years, as is the case with typhoid fever.

The writers state that, as observed in the French army in Algeria and in garrisons at home, the method has proven itself free from danger and highly efficacious. At the time of writing more than 27,000 persons had received prophylactic injections against typhoid fever in their entirety, and not one of these has presented since vaccination the symptoms of the disease. "We are," they say, "indisputably in possession of a method which, it is not audacious to claim, is for typhoid fever what the Jennerian vaccination is to variola."

The results it has given up to today in Morocco have passed all hopes and convinced the most skeptical. "The antityphic vaccination," writes the chief physician of the Hospital St. Louis, Mequinez, "is pursued here in intensive fashion. There remain in all the garrison no more than about 200 Europeans to be vaccinated. The results are surprising. The typhoid ward, hitherto so overcrowded, is today almost empty. Out of over 4000 troops there are actually only two under treatment for typhoid fever. It is marvelous!"

It will be observed that these findings are directly in accord with those made by medical officers in the United States army. While up to the present time typhoid prophylaxis has been nearly confined to the military service, the time is coming when it will be as extensively employed for the prevention of typhoid fever in civil life as smallpox vaccine to prevent variola. Already Dr. William H. Park, director of the Research Laboratories of the New York City Department of Health, has made arrangements to provide this bacterin for general use in the great metropolis. The wise physician will see the tendency of the times and be prepared to forestall any epidemic of typhoid fever in his own community by resort to this agent.

THE PROTEAN TUBERCLE BACILLUS

The more tuberculosis is studied, the more numerous the problems to be solved appear to become, and each new decision, each new settlement of a moot question appears to be followed by a score of others.

After Villemin had shown, in 1865, the infectious character of pulmonary consumption, it was believed that all that remained to be done was to find the virus responsible for the infection and for the infectious disease; and when Koch succeeded, in 1882, in demonstrating the bacillus that has been named after him, and is still called Koch's bacillus by French investigators, it appeared as though the problem were solved.

It was not many years later that Karl Spengler described what he called "splinters" of tubercle bacilli, or fragments; and within the last five years Much, of Hamburg, has demonstrated by certain staining methods the occurrence of granula in many tuberculous lesions that do not always take the carbol-fuchsin stain, but which are Gram-positive. These granula of Much are believed to represent a degenerated or attenuated form of tubercle bacilli, and their more or less remote identity with the latter is shown by the fact that they may undergo a recrudescence of virulence and again assume the character of an acid-fast rod. Dr. Much published many reports on his interesting studies, since 1907, in Brauer's *Beitraege zur Klinik der Tuberkulose*, and his method was recently discussed at great detail by Constantini, in *La Riforma Medica* (cf. *The Universal Medical Record* for December, 1912).

This does not, however, exhaust the possibilities and the problems of the tubercle bacillus, since particularly French physicians, among them Gougerot, also in the course of the last five years or so, have shown the occurrence of tuberculous lesions, usually acute, and characterized by severe septicemia, which do not present the anatomical characteristics of tubercle and in which even tubercle bacilli often are not to be found; yet they can be shown to be tuberculous in nature and due to the action of some form of tubercle bacilli.

Shall we conclude that the work of Gougerot and that of Much dovetail, and that the finding, by the latter, of granula which do not take the carbol-fuchsin stain but which are Gram-positive may offer the explanation of Gougerot's acute bacillosis, or the septicemic form of tuberculosis?

The same number of *The Universal Medical Record* says in an editorial discussion of the subject of tuberculosis that Dr. Foulerton has long maintained that the tubercle bacillus is really a streptothrix; but it would seem that we shall have to recognize not only a streptothrix form but a non-acid-fast bacillary phase, and a coccus stage which is characterized by being Gram-positive, and which is curiously alike to what Rost and Williams believe they have proved in respect to the leprosy bacillus.

And here is another curious fact, namely, the strange similarity in many points of

leprosy and tuberculosis; but to discuss that would lead us very far afield.

Reform is in the air. The whole world is up in arms. The old is going, the false is passing, and every man is searching in his heart to determine whether or not the things that he has believed are true and the things that he has done, right. Apply this new (and yet eternally old) morality to your own methods—your own practice. How can you think straighter—do better—accomplish more?

FEWER AND BETTER DOCTORS

It is a matter of common remark, among the laity no less than in the profession, that the standards and fitness of the medical profession are slowly but surely growing higher and better. Within the last twenty-five years the number of physicians has absolutely increased, to be sure; but the relative proportion of physicians to the population has quite noticeably decreased, and in the past six or seven years it is a fact that the number of physicians in the United States has decreased absolutely as well as relatively. And with this decrease in numbers there has been a marked improvement in the quality of the physicians themselves.

With that disposition to introspection which characterizes the present century, both laymen and physicians are seeking, and offering, reasons for this very desirable state of affairs. The medical view of the matter is undoubtedly expressed in the recent utterance of Dr. Chas. L. Dana, of New York, which attributes the change to the increased requirements for a medical diploma, and the falling off in the number of medical colleges. He points out that since 1900 the number of medical colleges in the United States has been reduced from 151 to 116; "and this decrease," he adds, "has been accompanied by a marked improvement in the quality of instruction and in the qualifications of the graduates."

He further points out, as a still more significant fact, that there are today 5000 fewer students in the medical colleges than there were no longer than seven years ago. The entrance requirements have been made higher, and likewise the requirements for graduation. And, with increasing knowledge and more thorough training, the work of these doctors is tending more and more to the prevention of disease, through sanitation and hygiene, with less necessity for the curative function.

All of which is undoubtedly true, as far as it goes. But it does not seem to me that it reaches the real underlying causes that are making for higher efficiency in medicine, as they are making for higher efficiency in every department of specialized work. The higher requirements and better education of medical students are not, in fact, the causes of the improvement, but the methods by which this improvement is brought about. We must search deeper and broader for the causes. It is to be remembered that medicine is, after all, only a specialized branch of the world's work; the medical profession only a class delegated by the public, upon the principle of division of labor, to carry out this branch of its work. And, as a stream cannot rise higher than its source, so the character and efficiency of the medical profession, and the quality and scope of its work, cannot, on the whole, transcend the average of public intelligence and demand.

The real underlying reason for the rise in medical efficiency is that a more intelligent and discriminating public is demanding a higher degree of efficiency and a wider range of usefulness on the part of the physician. Not that there is here any belittlement of the marvelous achievements of medical science itself, or any implied denial that the actual modes of advance, both as to education and also as to scientific agencies, are initiated within the profession. No physician, I should hope, but is justly proud of his membership, however humble, in such an honorable and progressive body. But the motive force of all this progress resides, after all, as I have said, in the demand sent out by the steady general development of public intelligence as a whole.

And—for this is the point that I wish ultimately to make—in this uplifting process the great rank and file of the general practitioners have played a most extensive and important part. They are the men who are in continual vital touch with the great public. They constitute the point of contact between medical science and its peripheries of practical application, which are the final test of its adequacy and efficiency; and, through them, both the demands and the results of this final gauge are transmitted to the centers of medical organization and initiative. Upon their keen appreciation and intelligent interpretation of the public needs, and their effective and faithful transmission of the stimulus to the center, depends the prompt and adequate response of medicine to the demands of the times.

One of the most notable signs of the times, in this respect, is the tidal wave upon which internal medicine is once again coming into its own. For this, also, the sanity and clear

vision of the man at the front, and his sensitive alertness to live issues, are largely responsible. He has been steadfastly holding a courageous line, all these years, against the inroads of therapeutic nihilism and surgical mania; and some of us have been confidently banking on his ultimate ability to turn the tide. Now the tide has turned, and the practitioner's persistence and our confidence in him have justified themselves. He has not only "put across" his demand (the public's demand) for therapeutics, but is insisting upon an exact, efficient, twentieth-century therapeutics. And he will get it.

Science in general is based upon accepted opinion, but in every detail is exposed to the scrutiny of individual research. The whole aim of scientific training is to teach reliance on one's own findings.

—J. Rae, Universal Medical Record.

MALINGERERS AND MALINGERING

Among the many difficulties that beset the practician of medicine, not the least are those presented by the folk who simulate disease. One branch of this troublesome breed embraces those who seek to secure monetary balm for injuries they never received. The transportation companies pay a heavy toll to this species of graft and usually find it advisable to settle if there is a plausible case presented by the alleged victim, rather than incur the expense of a suit, with the sympathy of the community on the plaintiff's side. Why the railways, which confer such incalculable benefits on the community, should so mismanage as to have public opinion invariably arrayed against them is another story, and one that will be told when a manager is developed who will appreciate the money value of public sentiment and adopt the easy methods of winning it.

More closely touching our personal interests are the malingerers who turn on their benefactors and seek "damages" from the doctor who has faithfully given his best efforts to cure them. Malpractice suits are rarely entered against the illiterate pretenders, but the victims are naturally sought among the prominent members of the profession who possess wealth of which they may be mulcted. Yet the method in such selection never repels the public, which too often sides with the plaintiff, instinctively. The reason for this attitude is not generally appreciated, but becomes apparent upon reflection.

The average man resents any real or implied assumption of superiority. The formation of an exclusive guild, separated from the masses by the constantly lengthening scolastic term, puts the physician out of touch with the people.

"The doctor has attended college until his youth is past; he is a creature of science; he smells of the laboratory, the microscope, vivisection, serums, and that terrifying last chance, the operation. His fees are scarcely less appalling, for medical education is overcostly in money and years. He is a being apart, to whom common men must doff the hat. Naturally so lofty a being can have little sympathy with poor, hungry, dirty, everyday humanity, can have little appreciation of our conditions, needs, possibilities. But Billy, here, the druggist on the corner, or Sam, who taught himself how to doctor horses, he is one of us. We accept with unaffected delight the notion of taking a rise out of his toplofty highness; but Billy and Sam belong to that greatest of guilds, ourselves, and they have done the best they could, so that to blame them for not knowing more never occurs to us. Dr. Lofty, A. B., A. M., M. D., and all that long string, claims to know it all; so let him stand for it. He charged old Heath $500 for operating on him, and Heath had to mortgage his shop to pay the bill." Thus they muse.

This antiprofessional sentiment is part of the great world's schooling by which the rough corners of men are rubbed off. Pretense is eliminated when assumption is challenged, and a man must make good or go back to his place. It is the law—the highest of laws—touching that fundamental truth that Darwin reached when he recognized the struggle for existence, and which Emerson realized in his law of compensation.

There is another form of malingering to which we may turn with less solemn mien. A clipping before me tells of a woman, 72 years of age, bed-ridden for five years. The house took afire and her daughter carried this old woman, from the top floor to the street, on her back. Then the invalid found herself possessed of strength to walk a block to a friend's, and after the fire was out to walk back and up to the fifth story, unassisted. Reminds me of a case. A woman, aged 35, weakly, brainy and cultured, but not pretty, years separated from a dissolute husband but not divorced, with no child to distract or occupy her life. She was penniless, earned a scanty living, by the aid of constant tonics, had nothing to live for or to expect from life. She was a superfluous woman; so she took to

her bed, and at last accounts had occupied it for five years.

Why not? What else could she do? Sexless she had ever been. She had no active interest in life, no wish to die. She bided her time. Some day, as the years go by, there will arise a new cult, a new prophet. She will attend his preachments, his hands will be laid upon her head in healing, and a new miracle will be worked. This woman who has been bedridden, lo, these many years, rises up and walks, cured in an instant and without resort to those ungodly doctors or their devil-created drugs. She is famous; her name gets into the papers, and willing hands are thrust into the pockets and endow her with the means of sustaining life, and maybe even luxury. Life has an object, now that she is lifted out of the ruck and made an object of public interest.

But, what was there to treat, since there was nothing the matter with her? She simply lay abed because she did not care to get up and work. What she needed was some incentive to live and to work. If some man had married her in her younger days, and left a fine boy to whom she could have devoted herself, she would have been cured. No such thing happening, she could only wait till the opportunity to enact the role of the miraculously cured came along.

The world is full of women who are invalids for want of a sufficient reason for being well, strong enough incentives to life and activity, to working and scheming, to occupy to the full their faculties.

Is it not the duty of the physician to find remedies for such conditions, as much as to stimulate a failing heart or tone a weakening nerve? Neither laboratory nor textbook aids us here. There is something beyond these crude helps. The great book of nature must be studied. It is psychology, anthropology, sociology, cosmology to which we must turn. Make the woman an active, useful member of society. Give her something to live for so absorbingly interesting that she will forget herself. Let her *want* something as energetically as did Cushman at Gettysburg, when he held up his protruding bowels with one hand while with the other he fired the gun one more time into the faces of the advancing foe.

Some of the most exquisite laces and tapestries have been produced by shut-in, bedridden women. Clark fought down the agonies of cancer to complete his last book. Anstie struggled against the pangs of angina pectoris to give the profession its best treatise on that malady. From her sick-bed Elizabeth Barrett Browning sent out her messages of love and human kindness. Alexander Pope ruled the literary world of his day with a body held together by the utmost art of the contemporary practician. DeQuincy and Poe gave the world their delightful creations, from bodies racked with suffering, and unwittingly taught another lesson to the illuminate, for intentioned with each exquisite figure struggled the dark and sinister opium-demon.

No woman is, or can, be in good health—physical, mental and moral—who has not somebody or something for which she cares more than for herself.

LEGISLATIVE DANGERS—LOOK OUT!

It is to be regretted that at this time of the year it becomes perennially necessary to warn the medical profession against dangerous or poorly drafted legislative measures affecting their interests. Unfortunately, the number of these bills is increasing, so that it behooves the physician to be constantly on the alert, especially if he happens to dispense his own remedies.

Such a bill has recently passed the lower house of the Indiana legislature, and it is in danger of becoming a law. Section 1 of this bill (House Bill 277) reads:

> That it shall be unlawful for any person except a registered pharmacist to retail, sell or give away any cocaine, alpha- or beta-eucaine, opium, morphine or heroin, or any salt or any compound, or derivative of any of the foregoing substances, or any preparation of compound containing any of the foregoing substances, or any of their salts, compounds or derivatives, and then only upon the written prescription of a duly registered physician, licensed veterinarian or licensed dentist; and it shall be unlawful for any duly registered physician, licensed veterinarian or licensed dentist to write, deliver or dictate, either directly or indirectly, any prescription to or for any habitual user of any of the drugs enumerated in this section.

There is more in this section, and a good deal more in the bill. For instance, it prohibits refilling of prescriptions containing narcotics (which is right), it requires the labeling of packages containing any narcotic with the word "poison" (which is putting it rather strong for every cough tablet, diarrhea mixture or hypodermic tablet), and it is so arranged, by specific exceptions, that it will not disturb the patent-medicine men in their business at all!

It is apparent that, by the terms of the bill as framed, the physician would be prohibited from dispensing in his practice any opium, morphine, codeine, heroin or cocaine.

He could not legally administer a hypodermatic dose of morphine without first writing a prescription, and perhaps not even then! He could not put a drop of cocaine in a patient's eye without violating the law. He could not even write a prescription for a narcotic for a drug-habitué, no matter what might be the emergency, and not even if he were trying to cure his patient of the habit from which he was a sufferer.

We understand that this bill was slightly modified before its passage by the House, so as to protect the physician in his right to administer his own remedies. It is now pending in the Senate, and Indiana physicians should keep advised of its future progress.

* * *

From several Kansas physicians we have learned that a bill to prohibit or limit dispensing by physicians has been introduced or will be introduced in the legislature of that state. We have no copy of the proposed law, and therefore are not prepared to advise you as to its details. However, in the December number of *The Journal of the Kansas State Medical Society* there is an article by Professor L. E. Sayre, of the School of Pharmacy of the State University, urging state inspection of the physician's drug supplies. It has been the fashion to assume that the physician uses cheap drugs. There is no doubt that by submitting the physician's supplies to inspection by a board of pharmacists, naturally not very friendly to doctors who carry their own remedies, no little annoyance could be caused the medical profession in Kansas.

As a matter of fact the imputation that physicians who dispense their own remedies use drugs which are inferior to those available in drugstores rests upon no sound foundation of truth. The evidence is in the main mere assertion or based upon the records of occasional and segregated cases. Since the Bureau of Chemistry of the Department of Agriculture at Washington has been examining the drug supplies handled in interstate commerce it has been weeding out the poor stuff, until any manufacturer who sells inferior drugs to physicians does so with the likelihood staring him in the face that he will sooner or later be called upon to pay a fine that will make it unprofitable for him to continue in his evil or careless ways. The dispensing doctors' remedies, therefore, are hedged about and protected by ample safeguards; they are undoubtedly just as carefully watched as are the druggists' supplies in any state in the Union—more carefully than they are in most states.

We are interested in and anxious to promote drug purity (it will lead inevitably to a recognition of the advantages of active-principle medication), and we shall be glad to see uniform inspection of all drugs, under conditions which will be fair to every party concerned and so framed that these conditions can not be used as a means for the persecution of any special class. This whole matter is one deserving careful discussion, and the physician, as the party most interested, should be given ample opportunity to thresh it out in all details.

We are sure that the physicians of Kansas will object strenuously to any bill likely to affect their interests being rushed through without their being given an opportunity to present their side of the matter. Especially iniquitous would be the introduction of any measure to prevent doctors from self-dispensing, affecting as it undoubtedly would the professional methods and financial interests of 90 percent of the profession in Kansas. We have too much class legislation in this country, and the doctor's position is already difficult enough.

Therefore, we advise our Kansas readers to keep close to their law-makers this winter.

Drugs, by themselves, have restored to usefulness and saved the lives of more people than all other curative attempts combined. And one need not be a crank on drugs to appreciate that.—Vermont Medical Monthly.

PNEUMONIA THE DEATH-CAPTAIN

"Pneumonia, as usual, leads as the chief cause of death, its record for the year being 5056, an increase of 127 over the preceding year."

We quote this from the *Bulletin* of the Chicago Department of Health for January 4, 1913. A disease that now leads all others in the number of its victims, which is constantly increasing, and for which medical science, as taught in the schools and in our textbooks, offers little in the way of treatment is certainly worthy of something more than passing notice, especially since there *is* one class of medical practitioners who have really been able to do something for it.

A little more than a year ago Wolverton published in *Merck's Archives* the report of 200 cases of pneumonia with only 5 deaths; 4 of these deaths occurred among the 59 cases of bronchopneumonia; among the 141 cases of lobar pneumonia there was only one death. Compare these results with the published mortality tables—those of Wells, for instance.

Yet Wolverton's experience is not exceptional; it has been that of hundreds of other able practitioners who rest their faith upon the defervescent active principles. It is because we have received report after report of like success when pneumonia has been treated by this method and with these remedies that, with all confidence and with the assurance that we are absolutely right, we assert that the enormous death-roll from this disease is entirely unnecessary.

We have said this before; but we wish to hammer it home again. We urge you, we beg of you, to give this method a trial, laying aside all preconceived ideas, all stereotyped theories. You will find the details carefully described in Dr. Candler's paper published in the January issue of CLINICAL MEDICINE. If you have not read it, do so now. If you have read it, read it again.

Unleash your imagination. Exercise your logic. Keep questioning and reasoning and sooner or later you'll find a flaw or found a law or discover a scheme that means promotion or independence.

—Herbert Kaufman.

USELESS PREPARATIONS OF ACONITE

Two Toronto therapeutists, Rudolf and Cole, in *The American Journal of the Medical Sciences*, present a study of the effects of medicinal doses of aconite upon the pulse-rate. By medicinal doses, they mean those recommended in the Pharmacopeia; and by aconite, they mean the tinctures of the United States Pharmacopeia and of the British Pharmacopeia.

The repute of aconite began with Fleming's thesis, published in 1845. Fleming employed the tincture since known by his name, and his doses were equivalent to 1-2 to 1 dram of the present U. S. P. tincture. From this dosage he certainly secured slowing of the pulse and relaxation of arterial tension! Ringer introduced the practice of giving doses of a minim every ten minutes, and in this he has been followed by many.

In sufficient quantities, aconite is a violent poison, killing by paralyzing the respiratory center. In less than lethal doses, it slows the heart by acting on the vagus, and lowers vascular pressure. The therapeutic action for which it is administered is stimulation of inhibition of the heart, without affecting the cardiac muscle.

Rudolf and Cole say: "F. W. Price found that all the samples he obtained from reputable druggists in England were inert when tested in Professor Cushny's laboratory." Rudolf and Cole used three tinctures found in the Toronto General Hospital, from three reputable wholesale drug firms. One B. P. tincture from a well-known firm, "tested both physiologically and by assay in the laboratory, and which we guarantee is of B. P. strength," when it was tested three months later was found to be "very weak." Finally, some pure crystalline aconitine was secured, made into solutions equal to the official tincture in strength, and proved active. Nevertheless, this also was found to be deteriorated after some weeks.

The experiments were made upon patients with normal and others with fast pulses. Some had fever, others none. In none of the 55 cases were there any decided effects upon pulse-rate from the usual or official doses. The favored test employed was Squibb's, the tingling produced upon the tongue by contact of the drug. A dram of the dilution was held in the mouth for one minute and then ejected—the tingling should be perceived within ten to fifteen minutes. Taylor considers this the best practical test. None of the tinctures tried gave this reaction, but the solution of crystallized aconitine of the same strength gave it very distinctly. Three months later this same solution failed to give the reaction, until the strength was increased fourfold.

The conclusion arrived at was that the reports of therapeutic efficacy of small doses were erroneous. Marked and even dangerous effects following small doses are attributed to mistakes in dispensing or administration or to idiosyncrasies.

The writer gave to a class of nearly 100 medical students each a granule of aconitine of 1-800 grain. Every man noted the tingling of the tongue, too decidedly for mistake, within five minutes, and some in less than a minute. These granules were at least a year old, possibly older. Granules more than twenty years old have given the same reaction just as decidedly. There was no appreciable deterioration in any of these. Pure milk-sugar preserves the activity of this alkaloid indefinitely in the dry state.

This is a valid argument against those who propose bowing to the conservatism of the profession by supplying solutions of the pure alkaloids, of the same strength as the official tinctures when freshly prepared and of full U. S. P. strength. The Toronto observations dispose of this proposition.

The observations also point to the fact that many are using this powerful drug with too great caution. Aconitine has been

heralded as so exceedingly perilous that many give even the small doses with trepidation. Many begin its administration for febrile conditions with fear, and before the doses have reached the point of efficient sedation get "cold feet" and change to the far more dangerous acetanilid.

Even to children but two years old the granules of aconitine may be given in doses of a single granule, 1-800 grain of the crystallized alkaloid, every half to one hour—*provided always* that a fully competent attendant stands ready to stop the medicine when sufficient effect is manifest. Otherwise it is best—and surely effective—to give smaller doses repeated every five or ten minutes till effect. But von Renterghem determined that the full, i. e., maximum, twenty-four-hour dose of the amorphous aconitine supplied either by Merck or Chanteaud was 5-6 grain, or 0.05 Gram. The dose of crystallized aconitine (which is the only body now allowed to be sold in the United States as "aconitine") given by the United States Pharmacopeia is 1-400 grain. Allow for pharmaceutic fallibility, and cut this in half—1-800 grain; the very rapid diffusibility of this alkaloid fits it notably for rapid repetition of the doses, so it may be repeated every ten minutes until effect. Don't worry—you'll get the effect.

I must here again call attention to the safety afforded in the use of the vascular relaxants by their quick diffusibility and rapid elimination. This relaxation of arterial tension permits them to be absorbed speedily, and the effects are manifested in so short a time that the rapid multiplication of doses does not permit of cumulation, but enables the attendant to judge readily when the desirable action is secured and the drug may be stopped or administered less frequently so as to sustain the effect. Even when an overdose may have been given, the elimination is so speedy that all one has to do is to sustain life by well-arranged roborant applications—heat, coffee, camphor; these rather than strychnine—and in a short time the peril has passed, as the poison passes out of the body. The objection to strychnine is that it increases the reaction of the bodily functions with any other drug that may be administered simultaneously with it.

One other reason may be cited for the occasional unexpectedly serious effects following the exhibition of aconite—influenza. I have witnessed symptoms of threatening collapse follow three granules of aconitine, given an hour apart, to an adult suffering from influenza. I have seen similar symptoms follow 1-30 grain of strychnine. Every practician could tell of such cases after one or two grains of acetanilid, or of some other remedy which in dose or nature was by no means expected to induce such depression. Such cases are apt to breed that superstitious dread of aconitine shown by so many. Whenever I find a physician speaking of its dangerous character or giving bromide of potassium in 2-grain doses, I feel sure he has had such an experience.

In those individuals who possess the underlying predisposition, autointoxication is by far the most prolific and most prevalent exciting cause of psychoses, disturbing, as it does, the delicate mental balance in such persons, thus precipitating attacks.—W. D. Partlow, Southern Medical Journal.

CANNABIS INDICA

About the most unsatisfactory drug in the materia medica is cannabis indica. Cannabis has a reputation of doing many things it doesn't do. To the Asiatic, it is supposed to afford visions of paradise; to us, it affords nothing in particular. A Hebrew friend is unkind enough to intimate that to the Westerner paradise stands in the relationship of an alleged sixth sense—something we shall never appreciate.

Cannabis defies the chemist. He extracts from it an alkaloid, and it fails to afford the therapeutics of the plant, even when administered in doses of twenty grains, while half a grain of a good extract gives results. Not one of the derivatives has replaced the extract. Cannabis has never commended itself to the Occidental in search of new vices, yet the insane asylums of Egypt are filled with the victims of the hemp habit.

Victor Robinson has just published a monograph on cannabis, which displays industry in compilation—he has found some data not embraced in any of the standard works. The diction is pure and graceful, as shown in all Victor's writings; and, as in all, he manages to put into this something of that intensity that characterizes this brilliant young spirit. Moreover, he does not stop with quoting, but goes on to make some experiments with cannabis the results of which are most interesting—all the more because they are utterly at variance with those which tradition leads one to expect. There's such a difference between men who set down what they think they ought to see, and those who really look with their own eyes.

It is an interesting little book.

Leading Articles

Evolution's Message to the Physician

A Few Words of Interpretation

By HENRY S. MUNRO, M. D., Omaha, Nebraska

With such crude microscopes and test tubes and laboratory equipment as we possess, the conviction is still rapidly gaining strength that we know mighty little about our sphere. We recognize no horizon to our endeavors. We despair of no goal. Emancipated from superstition and bigotry, with the wings of imagination to bear us onward and upward, who dares place a limit upon the achievements of tomorrow?

We've hardly started to think. We've barely learned to do. You can't stretch your imagination half as far as your own children will stretch their hands.

HERBERT KAUFMAN.

THE recent International Conservation Congress, held at Indianapolis, October 4, 1912, unearthed some startling facts that throw a tremendous light upon the problem of the medical profession, showing our shortcomings in relation to those individuals whose lives have been entrusted to our care. These facts are incontrovertable; they are presented to our consideration by a man who is neither physician nor sanitarian; and they are such as should awaken us to the realization that detecting microbes and applying the appropriate remedies to combat them, and diagnosticating gross pathological lesions and then cutting out the local manifestation of the diseased individual is not sufficient to meet the demands of an enlightened civilization.

Mr. E. E. Rittenhouse, conservation commissioner for the Equitable Life Assurance Society of the United States, in a paper read before this Conservation Congress, said: "The life-saving movement is still in its infancy. It has been directed so far almost wholly against contagious diseases common to infancy and early adult life, while degenerative diseases of middle life and old age, to which comparatively little attention has been paid, are steadily increasing. The average length of human life has been increased by increasing the proportion of people living in the younger periods, while the average duration of life of those who pass into middle life and old age has been constantly shortened. The principal items of life waste are due to the hazards, habits, and conditions of life which civilization has introduced."

He further says: "A million and a half people in the United States are constantly suffering from preventable diseases. During the next ten years, over 6,000,000 lives will be needlessly destroyed, if present conditions continue."

There you have it put down in cold figures by a business man! For over thirteen years I have endeavored to awaken the profession from its long sleep to a consciousness of our duty as physicians, having pointed out the spirit of unrest and dissatisfaction existing among intelligent laymen all over the world, at our enthusiasm over studying pathology, with no effort to correct the abnormal habits of the individual, wherever and whatever they might be, as a means of arresting the conditions favoring the development of his special manifestation of disease.

We certainly *deserve* our "medicine" handed to us by a representative of a commercial enterprise—an institution organized for financial gain. Is it not a reflection upon our professional characters that a business institution, recognizing that sickness is a material liability and that health is a realizable commercial asset, is forced to hunt down and relentlessly make effort to exterminate a large proportion of preventable diseases, while we, the doctors, sit idly by, living like parasites on the life of the community? Is it not the limit when we are brought to face a situation, as Mr. Rittenhouse has made us see it, wherein we must be forced to a recognition of our failure to do our duty to our patients by modern industrialism as it pursues counterfeiters, forgers and other commercial criminals?

He tells us that our efforts have been directed so far almost wholly against contagious diseases common to infancy and early

adult life. We know well enough that this is true. He further tells us that degenerative diseases of middle life and old age, to which comparatively little attention has been paid, are steadily increasing. We realize that this is also true.

What Are We Doing For Middle Age?

What have we been doing for diseases of middle life and old age—the degenerative diseases? The ideal "up-to-date" pathologist and diagnostician has, and he is still doing so, arrogantly gloated over his wisdom in his ability to make a diagnosis while he waited serenely for a postmortem to confirm his prognosis. If he could prove the correctness of his prognostications by the autopsy examination, he had scored a feather, in his own estimation and in that of a considerable portion of his unthinking colleagues; making no effort to get his unfortunate victim to conform to the physical, physiological, and psychological requirements of health, or to do as Mr. Rittenhouse suggests: "the individual should be educated to adopt the healthful habits of life."

Since evolution, biologically speaking, is the process by which any living organism has acquired its distinguishing morphological, physiological, and psychological characteristics, and since each of our patients is a living organism, we are forced to recognize that the cause of the disease-process—be it designated mental or physical, organic or functional, morphological or psychological—must be found in the environing conditions of life, which favor the development of the morbid pathology presenting itself in the symptomatology of the patient.

In other words, disease is a misadaptation to environment. The environing factors contributing to its development may be endogenous or exogenous. They may be bacteriological, occupational, dietetic, social or psychological. In every disease-process, the pathological condition presented can be found to express the peculiar reaction of a special type of individual to the conditions of his environment, true to the law of evolution in general.

The recognition of the pathology of any disease-process, be it mental or physical, is the first step to the understanding of our patient, but, except in incipient diseases of bacteriological origin, the pathological manifestation is effect, and not cause.

To name the disease and apply treatment to its most marked symptomatic manifestation, whether treated by medicine or surgery, without educating the individual so as to enable him to readapt himself to conditions whereby the morphological, physiological, and psychological elements which comprise the entire personality can achieve a condition of stability commensurate with the life of the normal, healthy, happy individual, is to fail to meet the demands. Until this re-education is done, our work is a pretense and a farce, whether so recognized by the individual patient or not.

At the present time many methods of "treatment" are in vogue, which are tolerated by an all too gullible public only because of their ignorance. The paper of Mr. Rittenhouse is a healthy indication that the discontent and dissatisfaction expressed by some of the laity, and the quiet acquiescence to existing methods by others, will not always be so easily satisfied. People are not fools—at least not all of them. Let us not be deceived. Let us face the facts as they are.

In all portions of the world, able physicians are emphasizing the importance of a broader scope for professional work.

"Scientific" Physicians and "Practical" Physicians

Dr. Grasset, of the Montpelier University, is quoted as saying that the classics and a broad training in literature and philosophy are considered essentials in the education of a physician; that he has no patience with those who differentiate scientific physicians from practical physicians; that there ought to be but one category, in which the physician is at once scientist and practitioner. He is further quoted as saying that formerly diagnosis was based on ascertaining the anatomic condition of diseased organs, in being able to localize a heart-sound or a pulmonic râle. Today it is far more complicated; above all, it is necessary to make a good clinical diagnosis, to take account of the functions of an organ. But, he continues, this is not sufficient to interpret obvious signs. It is necessary to collate a series of symptoms, to judge absolute and relative values, to classify and to coordinate them. Psychology, he says, is necessary in the education of the future physician not only for the study and treatment of mental and nervous diseases but also for all diseases; the mental condition of the patient must be considered, and the physician must have familiarized himself with the methods, processes of observation and general discipline of psychology. Humanity, according to him, has a fundamental need for good physi-

cians, in the deepest sense of the word. A bad or indifferent physician may do mischief and is a serious menace to society.

Evolution the Foundation Stone

Scientific men, writes Prof. Victor C. Vaughan, build their idealism solidly up from the ground; they do not suspend it precariously from star-beams. The foundation stone of my philosophy, he continues, is the doctrine of evolution. We deal here, not with inscrutable forces which man cannot know, cannot modify, cannot study, but rather with potent factors that call for the best effort in behalf of the race. What higher incentive can there be, for example, to keep one's self clean morally and physically than the facts derived from the study of heredity? And when the added undeniable influence of environment in the modification and improvement of the species is taken into account, it is apparent that every effort to improve the conditions under which men live is based on motives quite as dignified and worth while as the musings of the philosopher who claims to cultivate the good and beautiful for its own sake.

Dr. Vaughan is further quoted as pointing out that our knowledge of the spread of infection is the strongest factor in the social movements of the day; that disease still takes a heavy toll; that ignorance and deep-seated prejudices are often found retarding progress in unexpected quarters. According to him, the philosophy of science concerns itself with this world and this life, and reaches every condition.

"To widen the domain of knowledge, be it ever so little, to abate disease, to lessen pain and suffering, to decrease the burden of poverty, to brighten and ennoble the lives of others, to harness the forces of nature and make them subservient to man's will and contributory to his happiness, to make man more considerate of his fellow, to appreciate and perform his duties—these are some of the things that science has done and is doing."

One of the world's most distinguished psychiatrists, Dr. Paul Bourget, believes firmly in the almost unlimited future of this science and is persuaded that in particular the literature of observation—in which he includes history, criticism, the novel and the drama—will be enriched by it. According to him, the effort of genius consists simply in discovering by intuition the laws that scientists discover by humble and more patient methods. He sees these laws in action, and on this condition alone is he an artist. The term psychiatry and the science which it designates did not exist, he says, when the great creators of souls conformed themselves to the laws that this science was one day to formulate.

The proprietor of a great medicine-house—a man who is doing much to help doctors in his line of work—says, "manhood comes before money; character before cases; and the biggest thing any doctor can do is to save life." Says he: "I do not minimize the value of the hypothetical; but the value of theory is for the research-worker. Our work is to cure. Are we doing everything we can to cure our patients?"

The Divinity of the Universe

Says the distinguished author and naturalist John Burroughs: "We are slow to wake up to a sense of the divinity that hedges us about. The great office of science has been to show us this universe as much more wonderful and divine than we have been wont to believe; shot through and through with celestial laws and forces; matter, indeed, but matter informed with spirit and intelligence; the creative energy inherent and active in the ground underfoot, not less than in the stars and nebulæ overhead."

Further, Burroughs believes that some principle or force that we do not see is active in the ground underfoot and in the forms of life about us and which is the final secret of the origin of man and of all other creatures; that this something is the evolutionary impulse, this innate aspiration of living matter to reach higher and still higher forms. The rise of man from the lower order, he says, taxes our powers of belief and our faith in the divinity that lurks underfoot far more than did the special-creation myth.

Can we not see something more in those of our patients who seek our help, that we can appreciate and make them appreciate and use, than the weakness and inertia of the human flesh when they have failed to conform to the conditions whereby health and vigor of mind and body could be maintained? Shall we let old farmer Burroughs see more in the earth beneath his feet than we can see in the individuality, or character, of our patient?

The message of evolution to the people of the world is being brought forth and utilized by business men, by educators, by manufacturers, by laborers of all kinds—just in proportion as their intelligence becomes capable of appropriating it; but for physicians it means simply this: It is the character of the

individual, the psychic element of his personality, his intelligence, his reason which constitutes the *real self*. These constitute the character of the man himself, which uses as its instruments the emotions and the entire nervous system; and these are the means by which all interaction takes place between the individual and his environment. Each of these connecting links evolves together with the man, and we consequently have in every human being a vast system of evolution. Human action — structural, physiological, psychological—is explicable only by the operation of an eternal consciousness, which uses brain, nerves, muscles, viscera, and the rest as its organs and reproduces itself through them. "And I, if I be lifted up, will draw all men unto me." How true are these words as applied to every phase of present everyday practical life!

How I Shorten the Course of Labor

Practical Advice Upon a Practical Subject

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois
Professor of Obstetrics, Bennett Medical College, Medical Department of Loyola University

EDITORIAL NOTE.—This is the third article in the interesting and practical series upon obstetrics being prepared for CLINICAL MEDICINE *by Professor Rittenhouse. In these articles the everyday problems that vex the general practitioner are being discussed in a helpful way. Other papers will follow in succeeding issues of the journal.*

TWENTY-FIVE years ago the man who would have seriously proposed to employ systematic measures to reduce the length of labor in any except the most extreme cases of dystocia would have been regarded as a radical, and would have been silenced by the epithet "meddlesome midwifery." Even today a considerable proportion of the profession look with suspicion upon the suggestion that a socalled normal case of labor should be interfered with simply because it is too prolonged. They are not quite ready to receive the idea that a woman who has been in labor forty-eight hours, and who has finally succeeded in delivering herself unaided, although exhausted almost unto death, has good grounds for accusing obstetrical science of inefficiency.

As a rule when a labor lasts more than ten or twelve hours there is something abnormal about it; and it does not seem unreasonable to demand that the doctor should possess enough skill and take enough interest to find out what that abnormal condition is. Indeed, I would go so far as to say that, when a woman has had good contractions for three hours without producing any apparent result in the way of dilatation, the attending physician should make a careful investigation of the case to discover if possible the cause of the want of progress. Similarly, if the case at any stage fails to make the progress that may reasonably be expected at that stage, the cause should be sought and remedied if possible. For example, if the head be long delayed at the inferior strait, it seems to me the height of folly to let the woman go on to exhaustion when a little assistance with the forceps will do in a few minutes what it would take her hours to accomplish unaided. Of course, when I say "the inferior strait" I mean the bony ring, and not the vulvar ring. Delay at the inferior bony ring is of no advantage to the mother, while a slow passage through the vulvar ring (the soft structures of the pelvic floor) is of the greatest advantage in avoiding laceration.

Causes of Delay

Among the causes that tend to prolong labor unduly we may mention the following:

Occipitoposterior position,
Short bag of waters,
Narrow brim,
Narrow outlet,
Large head,
Breech presentation,
Rigid os,
Feeble pains.

Occipitoposterior Position

Most of the causes named in the foregoing lengthen labor by causing slow dilatation of the os, thus making the first stage so long

that the patient is exhausted before the stage of delivery arrives. Of all these causes the occipitoposterior position leads in point of frequency in the proportion of more than three to one. Most labors with the occiput posterior will, if unassisted, consume from thirty-six hours upward. If early recognized and corrected, they average little longer than do occipitoanterior cases.

In dealing with these cases, as long as they are making good progress I let them alone. If they do not (and this is usually the case), I aid dilatation until I can introduce my hand and rotate the occiput to the front, as described in this journal for January (p. 50). Because of the frequency of these cases they afford a fruitful field for study.

Short Bag of Waters

Hitherto but little attention has been given to the condition known as short bag of waters. Most of the textbooks do not mention it. And, yet, in an analysis of my cases since 1900, it stands second in frequency as a cause of prolonged labor. Previous to that date my records are not detailed enough to furnish evidence on the subject.

When the fetal sac protrudes through the os during a contraction, it makes an excellent dilator; but when it is too short to protrude, it has little dilating effect. The diagnosis is easily made by examining during a pain. If the finger can readily be passed between the os and the margin of the sac, the latter is not doing effective work as a dilator; for, if it did, it would be pressed so hard against the edge of the os that the finger could not be introduced without danger of rupturing the membranes.

When the sac is not doing its work of dilatation, it is best to rupture it and let the presenting part come down and act as the dilator. This usually is followed by decided improvement in the rate of progress.

Breech Presentation

In knee and footling cases, the progress usually is fairly good; in a true breech presentation, however, with the legs lying straight up in front of the body, the shape of the breech is such that it does not readily engage in the brim, and the first stage of labor is unduly prolonged. If progress is unsatisfactory, it is advisable to aid dilatation artificially until one can introduce a hand and bring down one or both feet, extending the legs. Then the matter should for a time be left to nature, so that the child's pelvis may have plenty of time in passing through the mother's pelvic canal to mold and crowd aside the soft structures, thus making more room for the easy delivery of the after-coming head.

The very-prolonged first stage so common in breech presentation is an infliction on the patient that is entirely unnecessary in most instances.

Rigid Os

The dilatability of the cervix varies very greatly, but, fortunately, a condition so unyielding as to require special or instrumental treatment is not very frequent. In the past fifteen years I have resorted to instrumental dilatation only three times, but I have used digital dilatation to some extent at some stage of the labor in at least fifty percent of my deliveries.

A frequent use of it is where, in a primipara, two or three hours of labor produces little or no dilatation. Here, if the os is once the size of a half-dollar, progress will go on satisfactorily; still, nature often will require ten hours to reach a dilatation of one inch, while two fingers will accomplish it in twenty minutes. Here I am prepared to hear a storm of protests and objections:

"It is meddlesome midwifery!"

"There is danger of infecting the patient."

"There is danger of lacerating the cervix."

"It is too painful for the patient."

"It is contrary to established custom."

To the last indictment I most heartily and cheerfully plead guilty! No one is more ready than I to learn from the wisdom of our ancestors; but I have never doubted that those same ancestors would be grieved to think that the world should regard their attainment as the limit of human progress.

In answer to the other objections I may say that infection will not occur when proper asepsis is insured.

Laceration will not occur, because there is not power enough in the abductor muscles of the fingers to produce laceration.

As to pain, most patients do not complain of it when they understand that it will save them hours of suffering; nevertheless, a few nervous ones bear pain so badly that the artificial dilatation is not practicable.

And the final answer to all the objections is, that twenty-odd years' practice of the method has failed to reveal the evils referred to; while, best of all, it has saved hundreds of women many hours of needless suffering.

Narrow Brim

When the head will not engage in the brim, either because it is too large or the brim too

small, the labor will be extremely prolonged unless intelligent assistance is rendered early. Before the head can pass the brim it must be molded by the contractions crowding it against the brim for a considerable time. This molding will not even begin until rupture of the membranes lets the head down, permitting it to rest on the brim. For this reason much time will be saved by early artificial dilatation and rupture of the membranes, after which the affair may be left to nature for a time, in the hope that the head will be molded sufficiently to permit its descent into the pelvis. If this does not occur within a reasonable time the high application of the forceps becomes necessary. In extreme cases it may be necessary to consider podalic version, craniotomy, or cesarean section, according to circumstances. A slightly larger head can be delivered by podalic version with the forceps on the aftercoming head than can be delivered head first, because the head is a wedge, the chin being the small end.

Feeble Pains

Women who are broken down in health by much child-bearing, and occasionally others, have such feeble and ineffective pains that little or no progress is made. Under these circumstances it is especially important to render early assistance, because exhaustion comes soon with them, and is proportionately dangerous. It is these conditions that result in some of the worst postpartum hemorrhages encountered.

Uterine contractions may be stimulated by the administration of 10 grains of quinine, 1-60 or 1-30 of a grain of strychnine, or even ergot; but the latter should be given cautiously as long as the child still is in the womb.

Pituitrin is praised in some quarters, but it is probably too early to determine its exact value. I have not given it a trial.

Artificial dilatation of the os is one of the best uterine stimulants I know of. Of the drugs, quinine has given me the best results.

Conclusion

In conclusion, let me say that no one can more readily concede than I do myself that the remedies I have proposed for the difficulties discussed in this paper may be capable of improvement. I shall rejoice if better ones are found. But regarding the importance of the subject I think there can be no room for two opinions. Is it any wonder that the intelligent and cultivated modern woman shuns child-bearing, in view of the fearful and prolonged suffering, much of it avoidable; in view of the cruel lacerations and mutilations, many of them needless; or in view of the semi-invalidism from which obstetrics as now conducted, has failed to save so many of her sisters?

In surveying the marvelous progress made by the sister science of surgery in the last quarter of a century, it seems to me that the keynote of that progress has been *fearlessness*. If the obstetricians of the present and future will show that same fearlessness in revising the traditions of the past, and in appealing to observation and conservative experimentation, I can see no reason why obstetrics should continue to lag behind her more popular sister science.

Puerperal Eclampsia

A Discussion of the Problem of Its Therapy

By W. C. WOLVERTON, M. D., Badger, Iowa

ALTHOUGH we are not yet entirely clear as to the etiology of eclampsia, we do recognize the fact that it is the manifestation of a grave toxemia which evidently has its origin in a renal insufficiency; the latter being responsible for a high arterial pressure, while the renal insufficiency is due to an overproduction of toxins, suboxidation, and underelimination. Recognizing these truths, the logical treatment is the prevention or at least the limitation of the toxin-formation, and the elimination of toxins already circulating in the blood stream.

While eclampsia is a comparatively rare complication of pregnancy and labor, nevertheless it does occur on an average of once in about 500 pregnancies, according to Williams. And then when it does occur, it is with such alarming suddenness and the need for prompt and intelligent treatment is so urgent that it behooves every physician doing obstetrical work to be on the alert, to know just what to

do and how to do it. It might also be in order to say that one should know what *not* to do, since the mortality, both of mothers and of fetuses, as well as the morbidity frequently are unnecessarily increased by a too hasty and too vigorous (not to say reckless) resort to forcible delivery.

The sudden removal of the fetus from the uterine cavity, be it remembered, will *not* cure the toxemia which is back of the eclamptic seizure; do not let that fact escape your attention. And *accouchement forcé*—which is French for saying tearing open the uterus forcibly and removing the unoffending fetus therefrom—may, and usually does, inflict great injury upon mother and child, while often causing the death of either or of both.

Impending Eclampsia Foretold by Increased Blood Pressure

The treatment of eclampsia properly is one of prophylaxis. As long as we had to depend solely upon uranalysis for our warnings of impending eclampsia, we were certain to receive some unpleasant surprises in the way of the advent of eclamptic seizures where we least expected them. With the perfecting of the practical, portable, and compact aneroid type of the sphygmomanometer, however, we have a true instrument of precision that infallibly shows at least six weeks before the appearance of albuminuria the presence of the underlying toxemia. To the correctness of this statement, a great number of the foremost obstetricians of the world unhesitatingly bear witness.

It was Mangiagalli, of Milan, Italy, who first pointed out the fact that a high blood pressure is the earliest and most constant sign of toxemia in pregnancy. The normal blood pressure in *non*pregnant women who show no signs of renal or cardiac lesions averages about 112 mm. of mercury. The normal arterial tension in *pregnant* women who show no evidences of toxemia is about 118 mm. This holds true for the first seven and one-half months of gestation; then the blood pressure gradually begins to rise, reaching 124 mm. about two weeks before term. In the presence of toxemia, the blood pressure is greatly increased. Mangiagalli found that the blood pressure in 39 women who had eclampsia, and in 18 who had no convulsions but had marked albuminuria, at the lowest was 142 mm. The highest pressure recorded in a toxemic woman *without convulsions* was 192 mm; the highest in an *eclamptic* was over 320 mm.

Hirst states that a blood pressure below 125 mm. may be disregarded; a pressure of 125 to 150 mm. needs careful watching and moderate eliminative treatment; while a pressure of over 150 mm. needs active eliminative treatment, and in all probability (especially if it shows a tendency to climb higher) will require the induction of premature labor.

We have seen, then, that through information obtained by the sphygmomanometer in its modern, perfected form, we have a convenient and accurate method of forestalling eclampsia. But how many men in the rank and file of the profession are making use of this exceedingly valuable diagnostic aid? Its use in the diagnosis of toxemia of pregnancy is only one of the many fields in which it has been found of value; and new uses are constantly being found for this wonderfully sensitive instrument. No physician is excusable for being without a compact, easily portable sphygmomanometer.

The Value of Frequent Urine Analyses

It is not too strong an assertion to say that, if a *thorough* uranalysis and a blood-pressure determination were made every two weeks during the last three months of gestation, in every woman who engages us to attend her in her approaching confinement, and if then intelligent treatment were directed at the conditions shown by these diagnostic aids, eclampsia would soon become a much rarer condition than it is at present.

And now a few words as to urine analyses. Most physicians feel that they have done their whole duty to the pregnant woman, who has put herself under their care, when they have taken the specific gravity of the urine and made some one particular test for albumin. Now, while it is true that a majority of eclamptics show such a high degree of albuminuria that the urine obtained by catheterization during a seizure will boil solid or nearly so, it is also true that there are many who show no albuminuria whatever, at least not until very shortly before the onset of the convulsions.

The most reliable index of renal eliminative function is the quantitative determination of the *total amount of urea excreted in the twenty-four hours*. And just here is the place for a word of caution. An estimation of urea is absolutely null and void and of no effect unless made from a twenty-four-hour specimen and unless we know how much urine was excreted during that twenty-four hours. And the quantitative determination of urea

is an extremely simple matter, using the well-known Doremus apparatus and freshly prepared solution of sodium hypobromite.

One should know, too, the degree of acidity of the urine. This is accurately, easily and rapidly calculated by means of the graduated glass tube devised by Harrower. With this same appliance, the amount of the urinary ammonia is also quickly determined. (It is well, also, to keep an eye upon the amount of indican appearing in the urine.) Other tests, indicated in individual cases, will occur to the intelligent practitioner; but those already enumerated, if conscientiously carried out and the results properly interpreted, will give the medical adviser a correct idea of the metabolic activity going on in the maternal organism.

Ballantyne, of Edinburg, enumerates the following as prodromata of threatened eclampsia: (1) High arterial tension, as detected by the sphygmomanometer; (2) persistent decrease in the amount of urine voided, and in the amount of urea excreted, as estimated from a twenty-four-hour specimen; (3) albuminuria, especially if the albumin be associated with albumoses, peptones, and acetone; (4) diminution in the percentage of chlorides. Along with these signs, there may be: (5) Edema, especially of the face; (6) slight jaundice; (7) amblyopia; (8) severe headache.

When such signs and symptoms are detected during pregnancy, especially in a first gestation, and more particularly in one not associated with a preexistent nephritis, the diagnosis of an impending eclampsia may safely be made; and the medical treatment indicated ought to be inaugurated without delay.

Prophylaxis and Treatment of Eclampsia

Treatment for eclampsia naturally divides itself under the following classification: (1) prophylaxis; (2) treatment of toxemia occurring during gestation, but without convulsions (the preeclamptic state); (3) treatment of eclamptic seizures occurring before or during labor; (4) treatment of postpartum eclampsia.

Under the head of prophylaxis come the routine use of the sphygmomanometer, as also the making of thorough urine analyses at proper intervals throughout pregnancy; and the intelligent interpretation and application of the findings to the regulation of diet, and stimulation of elimination. These points have been covered fully in the earlier part of this paper and so need no further amplification here.

The Treatment of the Toxemia of Pregnancy (Pre-eclamptic State)

When the sphygmomanometer (and, in advanced cases, the urinary findings, also) shows that there exists a toxemic condition, dietetic and medicinal treatment is in order. The patient should tentatively be kept in bed.

Food should be limited to milk, this being not only a food but also a diuretic of considerable value. Williams says that at least 2 quarts of milk should be ingested during the twenty-four hours. To relieve the monotony of a mi k diet, the patient may eat small quantities of lettuce salad, and of bread and butter. Considerable quantities of either plain or lithia water must be taken, or cream-of-tartar lemonade, using a dram of potassium bitartrate to a pint of water. Excessive drinking of fluids is contraindicated, however, in the presence of edema or anasarca.

Digitalis is contraindicated as a diuretic, because of its blood-pressure-raising effect; but sparteine sulphate possesses all the good qualities of digitalis, and none of its disadvantages. The dose of sparteine is 2 grains, in capsule, three to four times per day. Mild catharsis should be secured, to prevent fecal stasis and autotoxemia of intestinal origin. If this treatment does not cause a prompt return to normal conditions, give a daily purge, in the shape of magnesium sulphate. Also sweat-baths, to stimulate cutaneous eliminative function, are in order.

If, on the other hand, conditions do not improve under active treatment and the blood pressure remains high or continues steadily to rise, coma or eclampsia can probably be avoided only by the induction of premature labor, no matter what the period of pregnancy may be.

Some time ago, a great deal was said about the employment of thyroid extract in this condition; but it is now plain that this remedy accomplishes nothing except in cases where there is evidence of thyroid insufficiency.

Recently, in a preliminary communication published in *The Medical Record*, Geo. P. Shears, of New York, proposed the theory that toxemia of pregnancy, or, as he prefers to call it, "the preeclamptic state," is due to suboxidation; or at least that suboxidation is a prominent factor in its production.

Acting upon this theory, he has recently been treating his toxemic patients with

oxygen, freely administered, either by inhalation or subcutaneously; this combined with the usual milk diet, catharsis, hydrotherapeusis, and so on. He states that the results have been highly satisfactory and surprisingly prompt; but that the number of patients thus treated is as yet too small to formulate conclusions from them. It will be interesting to note the results in a larger series of cases.

Treatment of Seizures Before the Onset of or During Labor

There is a great diversity of opinion as to the proper treatment of the eclamptic seizure, owing to our uncertainty as to the etiology of the underlying condition; but upon the efficacy of certain remedial measures nearly all authorities seem fairly well agreed, namely:

1. Chloroform is to be administered, during the convulsions, in sufficient amount to control them.

2. Theoretically, morphine is contraindicated in toxemic states, because of its tendency to check excretion; but the majority of obstetricians seem to favor its employment in eclampsia. Williams advises that it be given in dose of 1-4 grain—repeated, if necessary, until three doses are given. The addition of from 1-200 to 1-100 grain of pure hyoscine hydrobromide to each dose of morphine increases the hypnotic effect of the latter markedly.

3. Hot-packs, to stimulate diuresis and diaphoresis.

4. The administration, hypodermically, of sparteine sulphate, in 2-grain doses every two to three hours until free diuresis takes place, then as needed.

5. Oil of tiglium, 3 drops in a dram of olive oil, placed on the back of the patient's tongue, if she can swallow; or administered through the stomach-tube if she is unconscious.

6. A cork or a piece of soft wood should be placed between the woman's teeth, to prevent her biting her tongue during the convulsive attacks.

7. Have the patient in a semiprone position, with the head turned back and to one side, so that the saliva will flow out from the mouth instead of back into the air-passages.

8. Medicine should not be given by mouth while the patient is unconscious, inasmuch as aspiration-pneumonia may result.

9. Delivery must be effected *as soon as is consistent with the safety of the patient.* And it is well to remember that rigid asepsis is just as necessary here as elsewhere in obstetrical practice. As a rule spontaneous delivery takes place, as the fetus is dead and has become a foreign body in the uterine cavity.

10. Nitroglycerin should be given, to lower the blood pressure; but its action is transitory.

11. Veratrum viride is regarded by *almost all* authorities as peculiarly efficacious in eclampsia, although the rationale of its action is not clear. It is believed that its property of markedly lowering the blood pressure is responsible for the beneficial results attributed to it. It also causes diuresis, by relieving spasm of the renal vessels; and has a powerful sedative action on the motor tracts of the spinal cord, thus relieving the nervous excitation. From 5 to 20 minims of the tincture is to be administered, hypodermatically, every hour, until the blood pressure falls below 160 mm. and the pulse is slowed to 80 or even 60 beats per minute. It is a notable fact that convulsions rarely occur where the pulse is kept below 60. In place of the veratrum viride tincture, the alkaloid veratrine may be given, in dose of 1 milligram, hypodermatically, and repeated every hour until the pulse-rate and blood pressure are satisfactorily influenced; after that, according to the urgency of the symptoms.

12. In case the foregoing measures fail of relief, venesection and the removal of 300 to 500 Cc. of blood, this to be replaced by an equal volume of sterile physiologic saline solution, is indicated.

13. High irrigation of the colon with warm salt solution is a rational procedure; and several authorities recommend gastric lavage, using salt solution to which has been added sodium carbonate, to overcome the acidosis often present. This use of sodium carbonate also applies to the enemata.

14. Pilocarpine is mentioned only to be condemned, for, while it makes the skin of the patient sweat, it makes the bronchial mucosa sweat also (to quote Sir Andrew Clarke); that is, it is prone to cause pulmonary edema, or else pneumonia may subsequently develop should the patient recover from the eclamptic condition.

15. Bladder distention is very common; so the patient must be catheterized at proper intervals.

16. Lastly, in our anxiety to save the mother, let us not forget that we are attending an obstetrical case, and that there is a baby.

Stroganoff, of St. Petersburg, recently reported a series of *over 400 cases* of eclampsia treated, with a maternal mortality of 6.6 percent, and a fetal mortality of 21.6 percent.

His method of treatment, briefly, is as follows: The maintenance of perfect quiet in a dark room; avoidance of all irritation to the renal region, such as hot-packs; supporting cutaneous activity by keeping the woman warm; stimulation of elimination by enemata of 150 to 250 Cc. of a warm physiologic saline solution; and keeping the patient constantly in a somnolent state by the use of morphine hypodermically and chloroform by inhalation. If the pulse-rate is from 112 to 120, Stroganoff gives digitalis or digalen. He bleeds only in the presence of pulmonary edema.

It would seem that, in the face of a high arterial tension, the use of digitalis is strongly contraindicated, and that sparteine is the indicated remedy, as the latter steadies the heart by its digitalis-like action, without raising the blood pressure; it is also a true diuretic, increasing the output both of urinary solids and water.

Mangiagalli states that since he began the use of veratrum viride the mortality among his eclamptic patients has fallen from 23 percent to 7 percent. He uses the best fluid extract, in dose of 5 to 10 minims, administered hypodermatically, and repeated as often as the blood pressure exceeds 160 mm., as determined by the sphygmomanometer; but if the pulse becomes rapid and small and arterial tension low, veratrum is contraindicated.

It is not considered that veratrum viride has any antagonistic action on the toxins of eclampsia; but the benefit seems to be entirely due to a lowering of the arterial pressure (besides its sedative action on the motor tracts of the cord and its diuretic effect), as high arterial pressure evidently is an important factor in causing death in *puerperal* eclampsia. In other words, the high blood pressure may be the cause of cerebral edema and exudation, and thus the cause of convulsions and coma.

Eclampsia occurring *post partum* calls for the same treatment as eclampsia in pregnancy or labor. *Puerperal* eclamptic convulsions are more prone to prove fatal than the other two varieties, so the treatment must be very prompt.

The Minor Peculiarities of Active-Principle Therapeutics

By J. M. FRENCH, M. D., Milford, Massachusetts

EDITORIAL NOTE.—In the January and February numbers of this journal we have published two of the addresses delivered by Dr. French before the students of the College of Physicians and Surgeons, of Boston, upon the topic of "Active-Principle Therapeutics." This is the third address of the series, which will be continued in the April issue of CLINICAL MEDICINE.

THE difference between a living language and a dead one is, that the one is always changing, growing, developing, adding, subtracting, dividing; while the other is finished, fixed, unchanging, mathematically complete.

The system of active-principle therapeutics is like a living language. It is not only alive, but it is still in the process of making, growing, undergoing development. Hence it is not subject to any fixed and unchanging laws. Even the principles which I stated to you last week as fundamental might be worded quite differently by another, and may be changed by common usage in another decade. And so it is that, when we come to consider the minor peculiarities of the system, the best I can do is to state the case as it seems to me. My neighbor might with as good reason state it differently.

But as I have been a student and practitioner of active-principle therapeutics for twenty years, I shall exercise my right as an oldtimer to state its peculiarities as they seem to me, and leave it to someone else to make such changes in phraseology as he may desire or as future developments of the methods of practice may warrant. No one can speak with absolute authority in the matter.

Use Single Remedies and Simple Combinations

1. The first peculiarity to which I shall call your attention is *the predominant use of single remedies and of simple combinations.* And even this is not entirely a peculiarity of this system, as it is the common practice of the Homeopathists and Eclectics, and the trend of recent usage in the regular school is

decidedly in the same direction, and away from the shotgun prescriptions and countless combinations, secret preparations, and proprietary remedies in such favor a few decades ago.

Only by using a single remedy at a time is it possible to determine the action of that drug with any degree of accuracy. When you come to make the practical acquaintance of the drugs you use daily (and you must do this if you hope to be good therapeutists), you will find that it is a work requiring infinite pains and patience and manifold repetitions, at the best, to determine the action of any given simple drug. And when you come to combine with this one drug one or more other drugs of different action, the difficulties are increased in a geometric ratio.

When, however, the action of each individual remedial agent has been singly and definitely determined, it is then possible to build up with care a few standard combinations the components of which, while modifying, yet assist each other in their action. Also, on occasion, extemporaneous combinations may be made to meet the changing conditions under certain conditions; but beyond this, the majority of physicians will find it advisable not to venture.

I have known but one practitioner whom I felt that I could trust to write a complex prescription, with full confidence that he would combine the various ingredients so as properly to adapt the resulting compound to the conditions in question. This man was a master of his art and could see the end from the very beginning. But for the most of us the single remedy is capable of doing better work than any complex prescription.

Definite Indications for Use

2. *Predicating definite indications for the use of remedies* constitutes the second peculiarity of our practice. While it cannot be claimed that this feature is confined to the user of active principles, it surely is emphasized by him in his practice. He gives his remedies, *not for diseases* as such, but for the definite conditions which occur in the course of disease. When it is once determined what conditions of disease may be met by any remedy, then this remedy can be relied upon as of value wherever that condition is found. The skill of a physician is best shown in determining the exact condition which is met by any drug. As an illustration of this principle, I have been closely studying for ten years a little-known drug, i. e., verbena hastata, in the endeavor to determine its precise indications in cases of epilepsy. That is, I have tried to find out what class of cases and what characteristic symptoms were benefited by this drug, and which ones were not helped or might even be made worse. In this ten-years' time I have succeeded in developing five somewhat definite indications —one for every two years!

The Granule the Preferred Form of Medication

3. *The soluble granule is chosen by us as the preferable form of medication in most cases.* Competent pharmacists declare that the soluble alkaloidal granule is the highest development of the pharmaceutical art. While I am not in any way capable of describing the method of their manufacture, I do know that the perfected result has many virtues. Small in size, always readily soluble in hot water, capable of retaining its full remedial virtues for an indefinite period, it may be given either in granule form followed by a drink of water or in aqueous solution, as may be preferred. It thus combines the virtues of liquids and solids.

Clean Out and Keep Clean

4. *The dogma of "clean out, clean up, and keep clean,"* as taught by Abbott and Waugh and practiced by their followers in America, is coming more and more to be accepted as therapeutic gospel. It is based upon a recognition of the importance of autointoxication as a cause of disease, and of absorption from the intestinal canal as a prime cause of autointoxication.

Treatment begins with elimination from the intestinal tract; calomel and podophyllin, in small doses, and the laxative salines, being the favorite agents for this purpose. These are followed by or associated with the use of intestinal antiseptics. The endeavor is to produce, with these two classes of measures, not indeed complete intestinal asepsis, but that which is at least partial, and it is very effective therapeutically in most cases. The agents most commonly used as intestinal antiseptics are the sulphocarbolates of calcium, sodium, and zinc, either singly or in combination. The results of the use of these intestinal antiseptics in the treatment of typhoid fever and allied diseases is certainly very satisfactory.

There has been much discussion concerning the possibility of securing an aseptic condition of the intestinal canal. The active-principle therapeutist believes that, while it is admittedly impossible to secure and maintain absolute asepsis, yet the comparative

degree which is attained makes it vastly easier for the defensive forces of the system to overcome the remaining millions of foes than it would be if their number were many times larger, as a result of a continued bathing of the intestinal canal in fecal poisons.

Seek Systemic Asepsis

5. *The importance of systemic asepsis and antisepsis* also is maintained as a companion doctrine to that of intestinal antisepsis. Of the numerous drugs which are used for this purpose, perhaps the most important are calcium sulphide and echinacea. It is even claimed that many of the contagious diseases may be prevented by saturating the system of the exposed person with calcium sulphide. I myself have repeatedly proved the power of this drug to prevent scarlet-fever, and have come to consider it a satisfactory substitute for quarantine in many cases. I will give you one illustration as typical of the whole.

A woman of thirty-five was taken down with scarlet-fever, which ran a typical and moderately severe course. During her illness, the house was strictly quarantined by the board of health, three persons besides the sick woman being confined therein during the whole time. These were her husband, her little daughter of some eight or ten years, and the husband's sister. None of them had ever had the disease, and all were confined in the house and went in and out of the sick-room with perfect freedom from first to last.

From the onset of the disease, I saturated them all with calcium sulphide, giving one grain four times a day to the child, and six to eight times a day to each of the adults. The smell of sulphureted hydrogen was obvious in the breath of each one, and this is essential to the proper result. This course was continued until the patient recovered and the quarantine was removed.

Not one of the exposed persons contracted the disease. It may not be considered strange that the adults escaped, but the child would certainly have been expected to contract the contagion. I do not claim that this case, or any one case, proves anything absolutely, but I certainly feel that I have had enough such cases to justify me in relying upon calcium sulphide as a satisfactory systemic antiseptic and as a means of preventing contagious disease, very often at least.

Vasomotor Equilibrium

6. *The importance of the vasomotor system* in those congestions with which almost all acute diseases begin is emphasized in this system of medication, and has been especially taught by Dr. Waugh. The latter makes the following assertion: "Circulatory disturbances herald the beginning of every acute attack and form an essential part of the phenomena presenting themselves throughout its course. Acute inflammatory attacks begin with a disturbance of the circulatory equilibrium. The affected part fills up with blood, which distends the capillaries, whose walls, relaxing under the increased pressure, afford an example of relative vasomotor paresis, being abnormally weak in comparison with the pressure to which they are subjected. But as there is no reason to suppose that the actual quantity of blood in the body has been increased, this overplus of blood in the distended capillary area indicates that there is too little blood in some other part of the vascular system. In other words, the vasomotor paresis in the hyperemic area is exactly compensated by a vasomotor spasm in some other vascular area."

It is for this reason that the fever remedies which are used by the active-principle therapeutist are selected; i. e., because they act on the vasomotor nervous system. Of this we shall learn more when we come to take up the subject of the treatment of fevers.

Selective Function of the Cell

7. *The selective function of the cells*, by which they are enabled to choose from the blood those elements which they have need of and appropriate them for the supply of their wants, while at the same time they reject all other elements and send them along to be used by such other cells as may have need of them, is another of the doctrines which guide the user of active principles in the intelligent choice of his remedies.

Stated a little more at length, the theory may be illustrated as follows: In the general blood stream, as it comes pouring out of the left side of the heart and goes pulsing through the arteries to every part of the system, there is to be found every kind of matter that goes to make up the different tissues and structures of the body. There is oxygen to purify the blood and revivify the tissues, phosphorus for the brain and nerve-cells, calcium for the bones, nitrogen for the muscles, and the proper materials for all the different kinds of cells, serous, mucous, muscular, glandular—in short, the things which are needed for every part of the body.

Nor can the material which is intended for the nutrition of one part be made use of by

any other part. Each cell claims for its own and takes unto itself that kind of material, and only that, which can be elaborated in its own factory and made up into the substances which it needs and uses in its daily life and work. Unto each part its own, and every part unto its own kind, is the law of life. So all through the different parts of the body this one fluid, the blood, goes coursing on its way, while at every station there are thrown off from the blood and taken up by the cells those particles of matter that are needed at this particular station, and only these. There is a selective affinity of each part for its own material. The hair-cells pick out with unfailing accuracy those substances which go to the making up of hair. The liver chooses only those materials which can be changed into sugar and bile, and the other liver materials and liver products.

Again, the quantity which is normally appropriated by any cell is the amount that is needed to restore and preserve the proper physiological equilibrium, or proper balance, of the functions. As the processes of waste are always going on, so the repair of the tissues must go on apace, and these two are normally equal, no more being taken up by the cells than is needed to carry on the natural functions of the part, or than can or carried off by the organs of excretion.

To be sure, just as in nature everywhere we find a normal action and an abnormal one, so here there is such a thing as loading down the circulation with matter which is not needed by any of the tissues, yet which cannot be gotten rid of except by the regular physiological processes of nutrition, and hence it has to be taken up by the cells; and there is such a thing as overburdening the system with the best of materials, so that the cells will take up more than they need, more than they can properly dispose of. In either case, the result is that the functions dependent on these cells are rendered abnormal in their action, or are depressed in their character, or are unduly stimulated. We then see symptoms of innutrition, of overnutrition, or of poisoning.

This scheme of adaptation is only in the line with what is done by reasoning creatures in meeting material needs every day, for there are none of us who live up to our light and knowledge all the time and under all circumstances. We all of us eat too much at times, and of improper food at that. If we did not, there would be few cases of colic, or typhoid fever, or gallstones, or rheumatism for us to treat. Nature carries on her operations automatically to a certain extent, it is true, but she makes false steps at times, and needs an intelligent mind to direct her in her work.

To carry this theory a little further, the principle which we have stated holds true not only for food and dietetic materials, but as to medicinal and drug substances. When active remedies are given in small amounts and repeated at the proper intervals only, we find that there is produced a definite effect (and if the drug administered was the indicated one in this condition, then it is a remedial effect) on some definite organ, tissue or structure; while the other organs, tissues, and structures are apparently uninfluenced thereby.

To illustrate: Hydrastis has an especial action on the mucous membranes; bryonia influences especially the serous membranes; jaborandi acts primarily on the sweat-glands and in a less degree on other excretory glands. Strychnine is the great nerve tonic. while iron builds up the blood; but, if too much strychnine or any other active substance is administered, it is not in the power of nature properly to dispose of the additional quantity, and harm results to the individual. The same is true of all remedial substances, in greater or less degree, in proportion to their activity and their power to accomplish good or ill.

In reliance upon this principle of nature, the user of the active principles does not hesitate to give aconitine and strychnine at the same time in a case of vasomotor congestion, knowing that the spasm will be relaxed by the action of the aconitine and the paresis be toned up by the strychnine, each without interfering with the action of the other, in accordance with the principle of the selective function of the cells. But, if the dose be increased beyond the ordinary medicinal one, then the cells may be overwhelmed and poisoned by the additional quantity.

Definite, Positive Results Are Sought

8. *Active-principle therapeutics aims to secure definite, uniform, and positive results from its use of medicaments*, and in order to do so two things are requisite. First, its remedies must be absolutely reliable; and this it aims to secure by the use of the active principles prepared in the granule form by reliable manufacturers. Secondly (and here I am only repeating, to emphasize what I have already said more than once), the man who

uses these drugs must have a definite knowledge of the action of his remedies, of the symptoms which indicate both their remedial and its physiological action, and, also, must know the natural history of the diseased condition which he treats, in order that he may understand what would happen if the case were left to nature, and what he desires to produce by medicinal treatment.

The best way that I know of for a young doctor to secure this knowledge is for him to sit the livelong night by the side of his patient, watching the symptoms with his own eyes, administering the remedies with his own hands, and storing up the resulting lessons in his own brain-cells. That is the way to become a good therapeutist. Especially it is the way to learn the successful use of the active principles in accordance with the methods which I am advocating.

Active-Principle Therapy Not Sectarian

9. *Active-principle medication, as a system of treatment, is not the basis for a new sect, 'ism, 'pathy or any separatist school of medicine.* Rather it seeks to obtain adherents among practitioners of every school, and without regard to any of these matters. It fights for its laurels on the firing-line of disease and proves its superiority by actual trial a the bedside. In order to enter its ranks, one does not need to renounce any old theories or take upon himself any new vows. It has no forms of initiation, no badge, no regalia. You read its literature, and, if its claims attract you, you send for a case of the granules and try them out in your practice.

A friend of mine writes me that he carried his alkaloidal case around with him for a year or two before he dared to try its contents. Then he was called in consultation by a brother physician, to see a boy of eight or ten years, sick with pneumonia. The case apparently was an exact reproduction of that of an older brother, who had been sick then for some ten days, and later ran a long course of double pneumonia, with, still later, empyena and various other serious complications, but who finally recovered. The boy that he saw had been sick thirty-six hours, had a temperature of 105° F., pulse 140, respiration 50, with the middle and lower lobes of the right lung solid, with all the classical symptoms of pneumonia, including delirium, restlessness, and expectoration—"If I know pneumonia," he adds; (and, as he was a Harvard graduate, he must have known pneumonia!) The attending physician was at his wits' end and willing to try anything.

"Then," my friend says, "I gave the little fellow a defervescent granule, containing aconitine, veratrine and strychnine, every fifteen minutes for two hours, then one every half hour for four hours, then one every hour until the fever dropped, telling a competent nurse to watch results and act accordingly. The result was marvelous, however the skeptics may explain it, for the symptoms began to abate at once, and in forty-eight hours the temperature, pulse and respiration were normal, cough gone, mind clear, and patient quiet, except as he was 'hollerin' like a Tammany chief for something to eat. He made a quick and uneventful recovery."

And this is the way that a good many doctors begin the new way of treatment.

10. *Although the best title for our method is that of "active-principle therapeutics," yet the materia medica of the practitioner of this method by no means is confined to the active principles.* Instead, he uses any and every means and method which experience and experiment have shown to advance the end in view—which is, the welfare of the patient. He is not a sectarian, but a physician, who seeks out of the vast storehouse of nature those things, new and old, which will produce results.

11. *Its basic therapeutic maxim is, "The smallest possible quantity of the best obtainable means to produce a desired therapeutic result."* This is the phrasing of Abbott, and it covers the use of remedies of any and all kinds.

Just "Common Sense"

12. At the risk of having you reply to me that I am begging the question, I am going to claim boldly another peculiarity of this method and its practitioners, which I shall call *common sense in the use of remedies.* To illustrate what I mean, I will repeat a little story that used to be told by an eminent professor in the medical school from which I was graduated.

The story relates to one of the early graduates of the school, and is intended to show the need of common sense and good judgment in the practice of medicine. As the story was told long before the days of active principle treatment, I must admit that it does not apply exclusively to their users today. Indeed, I am quite sure that the students and graduates of this school, whether or not they may accept all the principles which I have advocated, will agree with me as to the importance of this qualification.

As a student, the young man in question was a prodigy of information and never forgot

what he had once been taught. On examination day, he was able to answer every question of the professors, to quote the opinion of any author whom he had studied, tell on what page of the book this opinion might be found, and repeat the very words in which it was expressed. As a graduate, he carried off the highest honors of the school, and as a practitioner he was expected to reflect honor upon his alma mater. After receiving his diploma, the newly fledged M. D. spent a few weeks with his former preceptor in medicine, visiting patients with him, as was the custom in those days, and observing carefully the treatment and its results.

Among the patients treated during this time was one who had typhoid fever. The patient was a robust and full-blooded man, in whom the fever ran high, as was usual in such cases—a typical sthenic case, we should call it. The old doctor treated him according to the fashion of the times, with an emetic, a purge, and the lancet; then another emetic, a cathartic, and more bleeding; and finally winding up the antiphlogistic treatment with a dose of calomel and jalap, ten grains of each—"the double ten," as it was called. The patient, being of a rugged constitution and well calculated to bear depleting measures, survived the heroic treatment, and soon recovered his usual health.

Soon after this the young medico set up for himself in the practice of his profession. His field of labor was at a considerable distance from his former home, and more than a year had passed before he met his old preceptor again; and when he did, he seized the first opportunity—as you will do under similar circumstances—to talk of the remarkable cases with which he had been confronted during the year, and the wonderful cures he had performed. Finally he had made an end of these, and—"Now, doctor," the young man continued, "there is one thing I don't understand, and I wish you would explain it."

"Very well," said the old man, "state the case."

"Well, doctor," the young physician responded, "you remember that typhoid-fever patient whom you treated last summer when I was riding with you after I was graduated?"

"I do," assented the other.

"You remember how you treated him?"

"Yes."

"And he got well!"

"Certainly."

"Well, doctor, I had a case just like that one; I treated the patient exactly as you did; and the man died!"

"Is it possible? Died, did he?"

"Yes, he died; and I don't understand it. I wish you would tell me what the reason was."

"What kind of a man was he, anyway?"

"Oh, he was a little fellow, all weasened and dried up and thin."

"You are sure he had typhoid fever?"

"Oh, yes, all the symptoms."

"And you treated him just as I did my patient?"

"Exactly."

"And he died?"

"Yes, and I don't understand it."

"Did you give him an emetic?"

"I did."

"And bleed him?"

"Two or three times."

"And purged him?"

"Repeatedly."

"And wound up with calomel and jalap, ten and ten?"

"Yes, sir."

"And he died?"

"Yes. And, now, what was the trouble?"

The old man leaned back in his chair, drew a long breath, and seemed lost in thought for a few minutes. Finally he spoke.

"H'm! doctor, do you remember the old sorrel mare I used to drive?"

He did.

"Well, one morning in April, five or six years ago, I had to go out on the west road, through the woods and over the hills, some six or eight miles, to see a sick man. It was a warm morning, the frost was just coming out of the ground, and the road in some places was quite springy. Finally we came to a clayey piece of ground, and the old mare got stuck in the clay. The more she tried to get out, the deeper she got in, until finally she was in almost up to her belly. I tried the best I could to help her out, but the more I tried, the more I *couldn't* succeed. At last I called to some men who were plowing in the field not far away, and they came over and helped me. We got some rails from off the fence near by, put them under her body, and so pried and lifted and pulled away until finally we got her out."

Pausing a moment to take breath, the old doctor went on again:

"I didn't have to go over that road again for six months, and that was late in the summer, and the roads were dry and hard. But the moment we came to the place in the road where she got in the spring before, the old mare stopped short and obstinately refused to budge an inch. I touched her up smartly with the whip, but she would not go on that way.

I got out and tried to lead her over, but even that did no good. So finally I had to back her out of the road into the ditch, turn out into the fields, and let her go away out around the place where the clay-pit used to be, though now it was as firm and hard as any piece of ground on the road."

Here the old doctor ceased. His story was told, but young Esculap did not see the point.

"But, doctor, what has all that to do with my typhoid-fever case?"

"Young man, you were a good deal like that old mare. She had a most excellent memory, but d—d poor judgment. Circumstances alter cases, young man; circumstances alter cases."

The Distribution of Stomoxys Calcitrans

A Note on Its Possible Etiologic Relationship to Acute Poliomyelitis

By PHILIP A. E. SHEPPARD, M. D., Boston, Massachusetts

EDITORIAL NOTE.—In view of the announcement made by Rosenau, of Harvard, at the recent meeting of the Congress of Hygiene and Demography, held in Washington, D. C., that he had been able to demonstrate the transmission of acute poliomyelitis (infantile paralysis) through the bite of the stomoxys, or biting stable-fly, this report is of very great interest. Dr. Sheppard, its author, for four years was special investigator of the Massachusetts State Board of Health for this disease.

BRUES and Sheppard presented the results of certain epidemiological observations in Massachusetts in a report submitted to the State Board of Health on September 25, 1911. An abstract of this report was published in the *Bulletin* of the Board of December, 1911,[1] the full text of which was later published in the August, 1912, issue of *The Journal of Economic Entomology*,[2] entitled "The possible etiological relation of certain biting insects to the spread of infantile paralysis." Our observations were made in seventeen cities and towns in the state of Massachusetts, during the months of July, August, and September, 1911.

Brues and Sheppard (ll. cit.) in September, 1911, observed that stomoxys calcitrans L. (the ordinary biting stable-fly) was the only biting insect, other than mosquitoes, to be found constantly in the immediate vicinity of the patients, and from the then known facts suggested that stomoxys calcitrans L. may be responsible for the spread of acute epidemic poliomyelitis. No facts which disprove this hypothesis of September, 1911, have as yet been adduced.

In the same work it was stated further that the fact cannot be ignored that the greatest seasonal expression of acute epidemic poliomyelitis agrees strikingly with the greatest growth of stomoxys; and that it was impossible upon *a priori* grounds to rule out stomoxys, and a final decision must await the results of experiments then suggested, in which an attempt was to be made to transmit the disease among monkeys by means of stomoxys. The experimental work then suggested has been in part carried out by Dr. Rosenau and Dr. Brues, and communicated to the Fifteenth International Congress of Hygiene and Demography held in Washington September 23 to 28, 1912. Anderson and Frost,[3] by their series of experiments, have confirmed this work, and have carried the infection through a second series of monkeys. Meantime it has seemed well to report an omission in the first article, by studying the distribution of stomoxys calcitrans L. in the world at large.

My plan at first was to canvass, by writing, every city and town in America and Europe where infantile paralysis had been reported in epidemics, in order to ascertain whether stomoxys calcitrans L. had been observed in connection with cases reported; but a more ready and as accurate a method has been followed, viz., that of reference to reliable entomological literature.

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[1] Report to Massachusetts Board of Health, Sept. 25, 1911, briefly abstracted in the monthly *Bulletin* of the Board, for December, 1911, pp. 338-340 (1912).

[2] *Journal of Economic Entomology*, August, 1912, Vol. 5, No. 11. Ready for publication October 9, 1912.

[3] Anderson and Frost, "Public Health Reports," October 25, 1912.

By this means it is believed an apparent missing link in the chain of evidence will be furnished that might materially aid in drawing the cordon more closely around stomoxys calcitrans as the transmitter of the "virus" of infantile paralysis.

The points to be established *a priori* are:

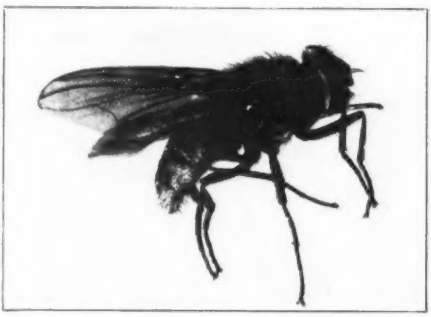
1. Is the stable-fly (stomoxys calcitrans) present in every locality where acute epidemic poliomyelitis occurs, and at the same season of the year?

2. Can it be shown that people sick with the disease give a history of insect bites?

To the first question we will answer in the affirmative from the evidence adduced below.

Stomoxys

The species calcitrans (Linné) was first described in Syst. Nat., 10th edition (1758), as Conops calcitrans. Linné, in a former writing ("The Fauna of Sweden," 1746) refers to this species (No. 1042), under asilus, as "Suecis *sting fluga*" [stinging fly of Sweden]. The type locality for the species therefore is Sweden.



The fly which carries acute anterior poliomyelitis (stomoxys calcitrans), greatly enlarged

Further it would appear from Austen's[4] writings that stomoxys calcitrans L. is "a common and well-known pest of human beings and domestic animals in Europe and Africa," and that "outside Europe and Africa, *where it occurs everywhere from Lapland southwards*, stomoxys calcitrans L. exists throughout the greater part of the world." Aldrich[5] states that this fly is "very common throughout the inhabited parts of North America." Howard[6] goes further and says that the biting house-fly (stomoxys calcitrans) "has almost as wide a geographic distribution as the true house-fly. It was probably originally a European species and has spread by the help of commerce to many parts of the world."

To the second question I will say that, in the vast majority of cases which I have investigated in Massachusetts since 1909, a history of bites from flies of other insects was obtained, and that I have personally observed the fly (stomoxys) in the immediate neighborhood of the cases.

The accompanying chart is presented as a type-curve both of the incidence of acute epidemic poliomyelitis in one community and the seasonal occurrence of stomoxys calcitrans observed in the same community.

It is interesting to note that the great European epidemic of poliomyelitis occurring in Norway and Sweden reported by Wickmann in 1905, was followed by the American epidemics, of which the first occurred in New York in 1907.

During the period of 1902 to 1907, it can be shown that Scandinavian emigration was greatly increased, and it is not unreasonable to suppose that "virus-carriers" were imported. With the probable transmitting agent (stomoxys) present in this country at this time, the disease probably was spread in and about New York by its means. So, too, the earlier Massachusetts epidemics may be accounted for in a similar way.

The disease once gaining a foot-hold in this country and in view of the universal distribution of stomoxys calcitrans, the later American epidemics can be explained on the basis of the Brues-Sheppard hypothesis of 1911.

Conclusions

1. The Brues-Sheppard hypothesis of September, 1911, states that it is impossible upon *a priori* grounds to rule out stomoxys as a carrier of acute epidemic poliomyelitis, and a final decision must await the result of experiments in which an attempt is being made to transmit the disease among monkeys by means of stomoxys.

2. This hypothesis of 1911 has been verified experimentally by the infection transmitted through the agency of stomoxys calcitrans from monkey to monkey.

3. Stomoxys calcitrans (Linné) is universally present in Europe and in America wherever the disease poliomyelitis is found in epidemics.

4. The type-locality for stomoxys is Sweden, where it occurs abundantly and in which country the great epidemic of poliomyelitis was reported by Wickmann in 1905.

[4] Austen, E. E., "African Blood-sucking Flies." 1909, pp. 142 to 143.

[5] Aldrich, J. M., "A Catalogue of North American Diptera," p. 530. (Washington pub. Smithsonian Inst., 1905.)

[6] Howard, L. O., "The House-fly as a Disease-carrier." (1911.)

5. The American epidemics of 1907 and later, up to date, may in the first place have been introduced into this country, and have spread from east to west by Scandinavian emigration and stomoxys.

6. No facts have as yet been adduced which disprove the accuracy of the Brues-Sheppard hypothesis of September, 1911.

It gives me pleasure to express my thanks to Mr. C. W. Johnson, curator of the Boston Society of Natural History, who has freely helped me in looking up the literature. For the photograph of stomoxys I am indebted to Mr. Brues of the Bursey Institute.

Cancer a Motile Germ*

The Meaning of This Fact to the Clinician

By G. BETTON MASSEY, M. D., Philadelphia, Pennsylvania

IT is not my purpose, in this brief paper, to discuss the claims of certain research-workers who think they have identified the germ of cancer, nor the denials of the correctness of these claims by others. This question is not in a condition for discussion by others than these special experimenters, and it is best for clinicians to stand aside until some agreement has been reached. Nevertheless I have a strong faith that conclusive facts will shortly be presented to us that will make the etiology of the many varieties of cancer as clear as that of malaria and syphilis, both of which have been cleared up so recently.

In the meantime, no harm can result from an assumption on our part, judging from certain clinical facts, that these affections (i. e., the several forms of cancer and sarcoma) are of a parasitic nature, and from so directing remedial efforts that we may anticipate in part the practical benefits flowing from the discovery when made. An opposite course—a failure to take the operative precautions dictated by the evidently parasitic and autoinoculable nature of these growths—is, I believe, costing us a large number of operative failures that otherwise might have been successes.

Character of the Cancer-Cell

The most important fact to be noted is, that the whole clinical history of a malignant growth indicates that its living components are motile, omnivorous entities, the degree of motility and voracity bearing direct relations to the degree of virulence.

Analyzing the facts more closely, it is evident that the degree of malignancy of a type of cancer or of an individual growth is but another term for the degree of the motility and voracity of the cancer-cell present in the growth. For what do microscopists regard as the essential condition present in a histologic section determining malignancy and by which a diagnosis of cancer is arrived at and its degree of virulence measured?

This essential finding, without which no diagnosis of malignancy is made, is merely more or less erosion of normal histologic elements and their replacement by migrated cell groups other than leukocytes. In other words, cancer is diagnosed at present, not by finding and recognizing socalled cancer-cells, as was formerly claimed, but by the evidences of a migration and conflict between the cells of the new growth and the normal cells of the part. The normal cells, even of the hardest osseous tissues, are destroyed, and in their place are found the foreign cells in riotous abundance.

The microscopic slide, it should be remembered, gives us a view of the conditions present at the moment of death. Sections at the edge of a malignant growth doubtless show us a picture of a battle-field taken at a single moment of the progress of the conflict. When the moving-picture machine can be successfully applied to this subject we shall know more of it.

The microscopic slide, then, is our strongest proof that the *materies morbi* of cancer is motile, for it is impossible that we can have erosion without motility of the eroding agent.

But, I should not say that the microscopic evidence is the strongest, though doubtless it is the most convincing. For what is the appearance to the unaided eye of the average cancer but one orgy of erosion, the growth devouring neighboring structures so clearly and distinctly that the facts are evident to the mere layman?

By some sort of mental inertia we have allowed the true significance of this erosion to escape us.

*Read before the West Virginia Medical Association, at Webster Springs, July 11, 1912.

If the picture of a neglected carcinoma does not convince you that we have a moving, boring entity to deal with, consider certain facts of autoinoculability.

Autoinoculability

It is true that the inoculability of cancer from individual to individual, even of the same species, is difficult, although it has been frequently accomplished of late, in the lower animals, the difficulty doubtless being explained by the fact that the experimenters have been trained mainly in the handling of vegetable organisms, while the cancer organisms most likely are protozoal. Still, when the question is one of autoinoculability, the ease with which this occurs in a susceptible individual is evident in nearly every case.

I have seen many secondary growths in an epithelioma of the face, implanted by the fingernails of a careless patient. There is evidence that a carcinoma has been transferred by the knife of the operator from such a growth in the ovary to the clean cut in the abdominal wall, as mentioned by Cullen and others. There are numerous evidences of autoinoculation in the local recurrences so common after imperfectly performed knife operations.

The phenomena of metastases, or secondary growths in the individual, are, in reality, instances of spontaneous autoinoculation. The mode of formation of these socalled metastases, which rather should be called colonies, is well known to be by the protrusion of a graft or of a single infected cell into the lumen of a vein or lymph-vessel, which later is broken loose from its attachment and floated onward through the vascular system until mechanically arrested, where it proliferates as a daughter tumor.

Practical Conclusions Arrived At

A realization of the phenomena of automobility of the living thing in a cancer which gives distinctive characteristics to these growths should justify us in deducing following practical conclusions:

1. We should be more optimistic in our views about early treatment, and no longer encourage that vicious circle, ever leading to worse results, that flows from a policy of early inaction and late operation. Who would think of waiting for a whole city to be infected with smallpox to prove that the infected immigrant in that city had smallpox? Yet we still hear of physicians who advise delay in operations when an early, scientific eradication of the local disease would save the rest of the body from invasion.

2. The fact that we are dealing with an evidently parasitic motile germ should render our choice of the method of eradication more scientific.

Any curetting or other disturbance of the living germs should be absolutely barred, and incomplete operations with the knife should be equally avoided.

A wide-sweeping excision with the knife, without wounding the growth or permitting its living cells to come in contact with the freshly cut edges of the wound should be the only knife operations done.

Should such excision be impossible in the particular case—but in many cases even when it is possible—we should employ a method which kills the affected cells *in situ*, such as the destructive sterilization by the electric diffusion of the ions of zinc and mercury that I have advocated. The x-ray also acts, at times, in this capacity, being most effective in certain widely spread skin affections of slight depth; but this slow method should not be employed in cases in which a few minutes' employment of the ionization process would be effective.

3. It is clearly evident that the prevalent subconscious, view of many surgeons, that cancer is incurable and possibly even constitutional, is due to the result of unscientific operations on a parasitic motile organism that is readily reimplanted in a susceptible host by unscientific technic in its attempted removal.

A Few Medical Fallacies

With Remarks (Pertinent or Impertinent) Thereon

By J. H. BRISTOW, M. D., Portland, Oregon

IT was said of old that, if one afflicted with cystitis would but take a hard-boiled egg, puncture a small hole in one end of it and then place it near an ant-hill, the cystitis would disappear as the ants removed the egg's interior, and be altogether cured when the task of the ants was complete. I will make the unqualified statement that no physician of this time would consider that method as being of any material value in the treatment of cystitis. The moral contained in the foregoing is obvious, and I ask you to think of it at times as you read what follows.

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Even those of shorter memory will recall the time when we were taught to think of pelvic troubles whenever a woman patient presented herself complaining of pain in the head, especially if the pain were located in the top of the head or at the nape of the neck. Attention is called to the studies of Cabot and Dercum, wherein it is shown that in 2327 cases of headache not one of the women had any lesion of the pelvic organs that could in any way account for their difficulties. The conclusions were that pelvic troubles—meaning displacement, ptoses, inflammations, adhesions, and so on, do not give rise to headache. The vastly preponderating cause are nervous disorders and (next in line) high blood pressure.

Were I a woman with a pain in the back I should hesitate a goodly time before I took my troubles to a socalled gynecologist. (Translation of "gynecologist": One who operates on women.) We must all agree that a woman with a pain in the back has something wrong in her pelvis; for, look, how close the pelvis is to the back. The investigators mentioned above found that, of 2451 women with pain in the back, not one had any pelvic disease that could in any way account for her troubles. Every one of us can recall "operated women that we have known" upon whom studies, exhaustive and otherwise, were made of uteri that were displaced, flexed, or what not, and operations performed, for the purpose of curing pain in the back. The uterus was fixed, but not the pain.

These remarks will apply especially to that class of cases in which all sorts of ills are caused by general ptosis of the abdominal contents, and in which there have been performed all the astonishing uterine fixation, plication, ablation, and other operations in the catalog, with a perfect disregard or ignorance of the conditions of general ptosis.

Upon the part of the layman of the masculine persuasion a pain in the back necessarily means kidney disease, and it is truly wonderful what extraordinary localities the kidneys occupy; I am at a loss to know why pain in the back of a woman should signify pelvic disorder, while pain in the back of a man points to kidney disease.

—

Lead and opium wash is known to us all as being about the best thing that ever happened for the cure of local inflammation. The lead constringes the tissues, thereby relieving congestion, while also, by its antiseptic action, destroying the infection. The opium, to be sure, relieves the pain.

Permit me to urge upon you the belief that lead and opium wash never did such a thing at all, and that, furthermore, you can do everything claimed for it with water. Try it, and you will find that the continuous application of water, according to the method used in applying lead and opium wash, will bring results as good in every respect. According to a classic legend seen on vehicles and fences in certain parts of the country, "it's the water."

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We are told that strychnine is a useful remedy in shock. It relieves shock by stimulating the spinal centers. Strychnine is a useful tonic. In parentheses: What is a tonic? For my own part, I have never been able to discern the slightest action from a physiological dose of strychnine, and I have given, hypodermically, as much as 1-15 of a grain in emergency. I have seen its action when taken in poisonous amount, and not otherwise. There are certain preparations of strychnine (as the arsenate) that I consider of value as a "tonic." (I hate the word.) In Germany strychnine is considered to be a drug of little value and is scarcely used. In this country we use vast quantities of it every year.

Of course none of us are ever guilty of prescribing pepsin in a mixture or in the presence of alcohol, for pepsin is inert in the presence of alcohol. The day is not long past since one of the most reliable drug houses in this country sent its representative among us, in order that he might show us how their essence of pepsin would digest milk and things. Finally it was demonstrated to this firm that there was no pepsin worth speaking of in their mixture, and that, anyhow, it was alcoholic. Now it is very modestly claimed to constitute a good vehicle. But, I wonder how many carloads of it were sold, on prescription, throughout the world, and how many cases of "indigestion" the alcohol in it cured. There was a fallacy in that, but not such a bad one, as I shall endeavor to show.

Pepsin converts albuminoids into peptones in the presence of acid media. Pepsin is a ferment. Pancreatin converts proteids into peptones in the presence of alkaline media. Pancreatin digests things; but pepsin digests pancreatin. But all this is nothing. We need pepsin and pancreatin and hydrochloric acid and some lactic acid and things to help us get away with what we take into our inwards, and therefore we have tablets and mixtures and elixirs and things in which are wonderfully combined, or contained, the active principles of spittle and gastric juice and bile and pancreas and spleen, and all that.

Perhaps you may think I am a little mixed here or that I am trying to confuse you. Not so. Only today there came to my desk a little booklet that naively explains all this tangle. I quote: "Digestion takes place all along the alimentary tract, and recent scientific researches show it to be interdependent. Therefore the true ferments . . . . should be used." Absolutely clear. As I understand it, the preparations that are so cunningly devised to cure our indigestion cause the different things contained in them to wait courteously upon each other, each performing its office at the right time and place, and in no way interfering with each other. That is the exact explanation of how digestives really act.

I cannot discuss papaw and some twenty thousand other things. The editor says "they aint no room."

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That "twenty thousand other things" is said seriously, for be it remembered that in this country there are about that number of proprietary remedies on the market, and about a like number of remedies of other sort. Forty thousand in all! In all that mess there are numbers of good things that help us wonderfully in our medication of the sick; but there is something wrong here somewhere. No one will contend that we need that number of remedies. Indeed it is well known that we can supply our ordinary needs with not over thirty.

I consider that the presence in the drug market of such a vast number of proprietaries is a disgrace to the profession of medicine. The vast majority of all these remedies were devised by those who have not the altruistic motives of the physician. Their aim and purpose is so clear that all may see. The major part of all this multitude of remedies was devised for financial gain only; and financial gain through such a channel can be had in only one way, which is, to play up to the difficulties of those poor mortals who, in sorrow, add to the sum of human misery by being afflicted with bodily and mental infirmities.

One would think that a profession as enlightened as ours would safeguard the public from the amount of dosing that makes the existence of all that dope profitable; but we must confess that it is by and through us that such a ridiculous situation is brought to pass. Let us pitch into the waste-basket the bundles of absurd stuff that comes to us through the mail; let us read up a little on the active principles, and finally possess ourselves of them in order that we may be rational and certain in what we give to the sick.

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I believe there are those who give codeine for the relief of pain. I speak particularly of severe abdominal pain and the pain that follows any sort of surgical operation. Now, there is an individual that is possessed of a certain amount of valuable information whom it would pay us to question regarding the outcome of some of our medication. I refer to the trained nurse. You prescribe a dose of codeine, but you do not remain at the bedside to note results. Your next view of the case is probably the next morning, and by then Time, that heals so many things, has permitted the patient to become better. The legend appearing on the chart, "Not a very good night," does not affect you much, seeing that now it is broad day, and the patient better; so you decide that your codeine is responsible for diminished suffering.

The nurse is reluctant to impart to you her unvarnished opinion of your medication; but, having questioned a large number of

nurses, I find them practically unanimous in expressing lack of confidence in the value of codeine for the relief of pain. Having had pain, myself, and knowing of the attempts to relieve it with codeine, and judging from observation, I consider codeine valueless for the relief of pain.

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Does anyone ever prescribe a gargle? If so, have you ever determined just how much of the throat is touched by a gargle? And that reminds me.

Here is our old friend and neighbor, the tonsil. Talk about getting it in the neck! Wherever there is the means at hand there is going on a veritable slaughter of tonsils. They are literally being removed by the bushel. There is a fallacy here somewhere. We are told that the tonsil is the portal of entrance into the system for all sorts of pathogenic germs. I don't believe it. We are even told that an enlargement of the tonsil will cause constipation. I am at a loss to know whether the latter is reflex, mechanical, or something other. We have been taught that rheumatism—that dreaded infection—owes its existence to the tonsil. Even relief from nocturnal enuresis has been promised by tonsillectomy. It is, in fact, not to be denied that there are those who are attributing almost every disease in the catalog to a dereliction on the part of the tonsil.

The function of the tonsil is not clearly defined. Many germs of different kinds are found on it and in it. But who can say to a certainty how they happen to be there? Perhaps they may, in part, be in process of excretion, and that, in place of being on their way in, they are coming out. We are not able so to affirm, but it is possible that the tonsil may have an important role in the protection of the system against the invasion of pathogenic germs. What is of equal, or even greater, importance, the tonsil may be the factory for an important internal secretion.

I will call attention to one significant fact: All inflammatory troubles that belong specifically to the throat are apt to be of a mild nature just as long as the inflammation is confined to the tonsil; but, should such infection spread beyond the tonsil, then we immediately have a more serious condition. This was especially true of diphtheria before the antitoxin days. This applies to all infections of the tonsil, according to the modifications of their particular action. While not susceptible of proof at this time, one can well imagine that the tonsil, like the thymus gland, has some particular office to perform in the growth of the child.

I am not excessively taken with some of the things that nature, in her supposed wisdom, has performed; but I am not inclined to think that she has endowed the race with an organ, such as the tonsil, that should be removed under the excuse offered for the average tonsillectomy. With due respect for the many good and honest workers in this field, I feel that the time will come when we shall look back upon the average tonsillectomy as we now look at the wonderful things formerly done to the uvula.

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Why does a dose of calomel move the bowels? I can understand why a dose of castor oil will do so, for it is a lubricant. [And some more.—ED.] It is never used in mechanics, though, for the reason that it gums up the bearings. Doctors who drive buggies ought to look that up.

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In considering a few of our failings, it would be well to tarry for a moment with the "antibody." We hear a lot about vaccines and antibodies these days, and beyond a doubt we are all the time coming closer to the halcyon days when we shall emerge from our long-time war upon disease with "victory perched upon our banners." At least as near as possible and still be human and mortal.

But it seems to me that we arrogate to ourselves a vast degree of knowledge in this generation that we are pleased to term so "modern." The world has been here quite a spell, I hear, and most of the time it has been on the move. I am impressed with the idea that it is going to keep it up, for a while at least. We think we know a whole lot more than our ancestors did, even those of them whose bones have not yet been assimilated back to other places in nature besides just ancestor bones.

Those ancestors had their remedies in which they placed just as much faith as we do in our vaccines. I realize that Amos, in his "treatment of typhoid fever with vaccines," showed us facts, or what appear to be facts, proving the wonderful efficiency of vaccines in the treatment of that disease. But his ancestors could show similar wonderful improvements over those who had gone before. They had the figures for it too, and have passed them on to us. If we are inclined to hold in slight esteem the knowledge of those who blazed the trail for us and consider ourselves as being superlatively well

informed, we should offer the apology to posterity that we were but human. We should, doubtless, make special provision for an apology concerning vaccines and antibodies.

Do not consider that I am "agin," or "forninst" our work along these lines, for I do my best to get results with the vaccines where they seem indicated. I wish, however, to call attention to a recent remark of my own: "There are many skilled workers who seem already inclined to depart from the usual and well-established methods in the preparation and use of vaccines."

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Glycerin and mud and stuff is applied to the skin for the reason that it possesses a hygroscopic action that causes a sort of transudation of inflammatory materials from any parts beneath the application, thereby relieving inflammation. There! Consider what a miracle is performed. As much as twelve years ago it was demonstrated by scientific experimentation that absorbent cotton had mud and glycerin tied to a post when it comes to the absorption of materials thrown off from the skin, including all conditions, pathological and otherwise, and all locations. Since that time there must have been shiploads of mud and stuff applied to the skin of suffering humanity by what we are proud to call an enlightened profession. It is so absurd to consider any antiseptic action from such a mixture that, having mentioned it, I will pass on.

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Fallacies. In our almost feeling of infinite wisdom, we arrogate to ourselves wonderful deeds in modifying the processes of life. Indeed, right here in our own time comes Prof. Schaefer, who says that we can, by chemical means and without Divine intervention, produce living protoplasm. I have not the remotest doubt of the truth of his assertion, for it is well known to me that, if you pluck from the tail of a black mare a hair at the time when the June moon is dark, and place the hair in running water at any point where the water will finally flow into either the Wabash or Nolachucky River, it will turn into a water-snake!

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How well we can remember the time when everyone who could afford it had in his office an x-ray machine and just naturally cured everything with it. I speak reverently of the dollars we parted with for them. The x-ray machine, with its glass wheels, and its big noise, and its dish of lime, was not yet rusty, indeed it was still running (with more noise), when one and all parted with the money we make so easily for a vibrator.

Our vibrator, speaking collectively, would vibrate anything from the skin clear through to the uttermost structure. It would vibrate through an arc as wide as the firmament, or as narrow as a hair-follicle. It would vibrate up and down or crossways or in a circle. Among other things, it would cure pruritus ani, bubo, psoriasis, and constipation. I understand that on the East Side there were women who went to the doctor regularly for a vibration whenever they wanted a movement of the bowels. I have not the remotest doubt that there were those who attempted to produce abortion with the vibrator. To make our humiliation complete, the manufacturers, when they had taken all they could from us, put full-page ads in the daily papers, demonstrators in the show-windows of the electrical supply houses, reduced the price several hundred percent, and sold thousands of vibrators to the laity. The lay mind arrived quicker than we did, for the crusade lasted but a few months, while with us it lasted several years. All in the same generation that uses vaccines and talks about antibodies.

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The temptation to say something about medical books, meaning textbooks, books on special subjects and other books too numerous to mention, is a great one. One hardly dare speak in a spirit of criticism, for the books represent the vast volume of work upon which our knowledge is founded. But it begins to be an irksome task to listen to the song of the bookman who wishes to sell you five volumes at seven-fifty per, in order that you may be possessed of the very latest views of Prof. Senhorsler regarding the action of the nasal secretion in the month of February. All can recall the remarks about the necessity of having this book or that in order to have a complete library. No library complete, in fact, without this leader, terms to suit.

It begins to look kinder funny when it is absolutely impossible for one person to buy, much less to read, even a small part of the books that are offered. At a hazard I will make the following statement: There is no man who has read more than a tithe of the books printed in the last five years—or three—or one—or whatever period you like, including only those books represented to contain essential knowledge. I may not understand the book situation, but in any case I am afraid to try to explain.

The medical-book seller used to be a pleasant man to interview, but there is a growing tendency for him to try out upon us the average methods of the book-agent, and to show an undue persistence in his desire for sales, and finally a disgruntled countenance if we fail to buy. I am waiting to replenish my library, because I feel that pretty soon there will be a clock and paper-weight and pocket-dictionary given as a premium, and that we shall be charged "only for the binding"—and that will be such a good binding that it can be washed clean with a wet towel.

I have a remedy to offer for this sort of thing. It is well known that the majority of the book-houses who print our books are in no way obligated to us, nor have they any connection with us. They print our books and undertake to sell them to us, all as a side line to a general printing business. It seems to me that it would be better if our books were printed by houses whose exclusive business it is to cater to the profession, or by a concern controlled by the profession.

Some grouch. What!

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[Reading the preceding you may arrive at the conclusion that Dr. Bristow is a pessimist, a nihilist, a destructive critic, and all the other things we optimists look upon as "bugaboo." Not a bit of it. He really is a hard-working and successful constructive clinician, and to prove that this is the case he has promised to prepare for us (after a reasonable amount of recuperation from the effort involved in getting "Fallacies" out of his system) a practical paper upon a topic that we believe will interest every reader of CLINICAL MEDICINE. We shall hold him strictly to his promise.—ED.]

An Effective Treatment for Scarlatina

With Notes Upon Symptomatology

By GEORGE H. CANDLER, M. D., Chicago, Illinois

THREE varieties of scarlatina generally are recognized, namely: (1) simple, (2) severe, (3) malignant. Practically every attack may be regarded as simple in its earlier stages. On an average, nine cases out of twelve develop within five days after the subject has been exposed.

The prodromal symptoms are: malaise, sore throat (which may take the form of a well-marked tonsillitis), anorexia associated with nausea or vomiting, and a more or less pronounced chill followed by hyperpyrexia.

Symptomatology of Scarlatina

The patient's tongue is coated early in the attack, and the breath invariably is foul. He may complain of headache and of discomfort or pain in the throat. Within twenty-four hours we have to deal with a really sick child, the pulse at this stage being rapid and thready, and the temperature ranging from 101° to 103° F. Extreme irritability or semistupor will usually be observed.

Some time within twenty-four hours the typical rash makes its appearance; the temperature during this period may reach 105° or even 106° F. Improperly treated, this condition persists, the temperature ranging each day between 102 to 105 degrees, with the patient presenting signs of profound systemic sepsis.

The cervical and submaxillary glands are enlarged, and the angina becomes pronounced. A small quantity of high-colored, extremely acid urine is voided; the bowels are constipated; extreme thirst is experienced. Albuminuria is not uncommon. It should be remembered always that the septic process seems to center in the lymphatics or else in the kidneys. The appearance of the tongue usually is typical, especially by the time the rash appears. It is heavily furred, with red border and tip and the papillæ prominent generally over the surface, the whole presenting the "strawberry tongue" of the textbooks. The buccal mucosa rarely shows any abnormalities. The maculæ which are observed in the earlier stages of *measles* are not present in scarlet-fever; however, stomatitis occurs occasionally.

The rash persists for from forty-eight hours to seven days. Under appropriate treatment, however, desquamation usually begins on the fifth day, and normal conditions will again obtain within two weeks. Where correct medication is instituted early, that is,

before or just after the rash has appeared, the prognosis is good in practically every instance. If the patient is seen after the period named, the prognosis should be guarded; yet even here prompt elimination and the maintenance of relative intestinal and systemic asepsis, together with support of the normal resistant and vital forces, will accomplish more than any other method.

The writer has treated a sufficient number of scarlatina patients to enable him to express an intelligent opinion, and he believes that the intense sepsis, exhaustion, hemorrhage, aspiration-pneumonia, and nephritis, which so frequently cause a fatal termination, can be prevented in practically every instance.

The Treatment of Scarlatina

The foul tongue, circulatory disequilibrium, together with nausea, headache, and general malaise alone point decisively to systemic toxemia; the initial chill and subsequent fever speak plainly of the effort of the body-forces to resist the invasion of bacteria from without and noxious ferments from within. Thorough elimination—renal, cutaneous and intestinal—therefore is the first essential consideration in the treatment.

Children under ten years will receive immediately 1-10 of a grain of calomel, 1-12 of a grain of podophyllotoxin—or 1-64 of a grain of podophyllin—every half hour until six such doses have been taken; 1-12 of a grain of bilein may advantageously be added to every other dose. *Children over ten* should receive 1-6 of a grain of calomel and 1-6 of a grain of podophyllin every hour for twenty-four hours; calcium sulphide, 1-3 of a grain; nuclein, 8 minims. After the first twenty-four hours, this combination should be given once every two hours. Then, one hour after the last dose of calomel and podophyllin, an effervescent laxative saline draught should also be given, dissolving one teaspoonful of the saline in one-half to two-thirds of a glass of sweetened water. This flushes the intestine, soothes the irritated mucosa, and acts as a diuretic.

As soon as the bowel has acted freely, a copious enema of decinormal salt solution should be administered. If a portion of the enema is retained, whereby renal activity will be materially increased, this step alone often saves renal complications. After twelve hours, under such treatment, sulphureted hydrogen will be present in sufficient quantity in the system, the intestinal tract will be cleared of gross debris, and fermentation and spore growth will be inhibited.

The Care of the Skin and of the Throat

The patient now is carefully undressed in a warm room—exposing only a portion of the body at a time—and the skin sponged with a creolinated solution of magnesium sulphate (magnesium sulphate, 1 ounce; creolin, 10 minims; water, 1 quart). After drying, the whole body is anointed with a good antiseptic oil. The latter application should be repeated morning and night. After five days, the patient's body is again thoroughly cleansed with the epsom-salt solution, as warm as tolerable; the oil then being applied but once a day.

The mouth, throat, and nares should be cleansed with an alkaline antiseptic solution several times each day, always before taking medicine or food. One compound menthol tablet dissolved in 12 ounces of water containing 2 drams of glycerin proves an ideal preparation for this purpose.

We now have a therapeutically clean patient, usually with skin, bowels, and kidneys excreting freely; the entire system, moreover, being saturated with sulphureted hydrogen, while leukocytosis has been stimulated by the nuclein. The patient's temperature at this time (12 to 24 hours after the first visit) probably will be found 2 or 3 degrees lower.

At this stage, calcium sulphide and nuclein should be continued, giving it every two hours. In addition, aconitine, 1-1000 of a grain in solution (smaller doses if the patient is under the age of 5) should be given every two or three hours, to relieve congestion, relax the capillaries and equalize circulation. The addition of digitalin, 1-64 of a grain, to every other dose, will increase these desirable effects upon the heart and large vessels. However, if the skin is unusually dry and the pulse hard and full, veratrine should be substituted. Veratrine, it should be remembered, markedly stimulates the lymphatics and, as extended clinical experience has proven, strongly antagonizes the toxins of scarlet-fever. After twenty-four to forty-eight hours of such treatment the pulse will be quick, but soft and regular; the skin moist, tongue reasonably clean, and the temperature ranging around 101° to 102° F.

Now cool barley water flavored with lemon or orange juice should be given freely to insure diuresis; also, twice a day, a small quantity of a laxative saline.

Throughout the entire course of the disease it is desirable to push intestinal antiseptics. An ordinary dose of an intestinal antiseptic

—the three sulphocarbolates combined, or 1 or 2 grains each of the sodium and calcium sulphocarbolates followed by a few swallows of water—should be given every four hours throughout the day. If the stools are foul or diarrhea is present, the combined sulphocarbolates of sodium, calcium, and zinc prove preferable. When the intestine has been emptied and is comparatively free from pathogenic microorganisms, the sodium and calcium salts may suffice, 1 grain of each three times a day not infrequently proving sufficient. The physician naturally will be guided by the state of the bowels; always remembering that sodium sulphocarbolate is indicated where hyperacidity and flatulence obtain, and that calcium is essential to cell reproduction. The latter element, being almost entirely lacking in the food allowed the sick child, should be supplied by the physician.

The throat should be cleansed thoroughly (sprayed or swabbed) with diluted hydrogen-peroxide solution morning, noon and night. Furthermore, if the angina is at all pronounced, calx iodata, 1-3 to 1 grain (preferably in powder form) should be placed dry on the tongue and washed down with a few sips of water. Also, compresses wrung out of a warm carbolized epsom-salt solution may be applied to the throat; the compresses, frequently changed, being covered with flannel.

On the third to fifth day, as a rule, the child feels well and wants to get up. At this period the aconitine and digitalin (or veratrine) may be dropped, while the calcium sulphide and nuclein are given in reduced dosage (1-6 grain and 2 minims, respectively) every two or three hours. The sulphocarbolates, of course, will be continued—together with calx iodata—if the throat symptoms demand it. Every second or third night calomel, gr. 1-10 to gr. 1-6; podophyllin, gr. 1-6 hourly for two or three hours, should be ordered.

Desquamation having commenced (which, though, may not at any stage be apparent, save on the plantar and palmar surfaces), the child should be bathed thoroughly from head to foot with hot water and a good antiseptic soap, dried, rubbed well with the antiseptic oil, and then put into a union canton-flannel night-suit. All other clothing and all hangings should be removed and soaked for three hours in a 1 : 10,000 bichloride solution, then boiled.

Finally, when desquamation is complete, the patient should take a hot bath in a 1 : 10,000 bichloride solution, be enveloped in a sheet wrung out of the same solution, and carried into another chamber, where he may don clean clothes, ready to reenter society. The sick-chamber and contents must be fumigated in the usual manner.

The various complications which may arise are not here considered, for the reason that under this treatment they do not occur in one case out of a hundred. As a matter of course, the urine must be examined from time to time, and possible uremia guarded against. Should there be suppression, small doses of glonoin and of caffeine, copious saline enemata and the hot-pack will be found efficient; cactin and brucine support the heart.

The convalescent should be placed upon the arsenates of iron, quinine and strychnine, with nuclein, after meals. Also, some mild glandular stimulant (xanthoxyloid or irisoid, gr. 1-6 to gr. 1-3, three times a day) is advisable. If lime insufficiency is apparent, calcium lactophosphate should be ordered.

Bacterin therapy has at last invaded the field of contagious diseases, and there is on the market at the present time a polyvalent scarlatina bacterin containing many strains of the streptococci encountered in patients suffering from this disease. While my experience with it has been too small to warrant me in making deductions as to its value, excellent results have been reported as following its use. When employed prophylactically, three doses are given at intervals of seven to ten days. The first dose contains 250 million dead germs, the second 500 million, the third one billion.

Undoubtedly scarlatina bacterin has been used with marked success for the prevention of scarlet-fever. It will provide protection for the majority of persons who may be exposed, while it modifies the course of the disease favorably in those who may develop it after vaccination. After the disease has developed—or as soon as diagnosed—from 10 to 50 million of the killed streptococci are injected as an initial dose, this to be repeated every one to three days. The condition usually clears up rapidly, the temperature falling within twenty-four hours; after which a second injection may be made if a tendency to rise again is observed.

It is asserted by those using the bacterins that complications are largely prevented by their use in this disease. Many of these complications are directly due to streptococcic infection.

It is advisable to use bacterins in the treatment of every case of scarlet-fever, since they do no harm and are not contraindicated, except in patients suffering from nephritis.

My First Fat Fee

How I Won Fame and Fortune in Africa

By RALPH ST. J. PERRY, M. D., Farmington, Minnesota

EDITORIAL NOTE.—Dr. Perry warns the readers of CLINICAL MEDICINE *not to repose too great faith in the circumstantial verity of all the details of this story. He yields this point to the cause of Truth! However, he does not believe that a few minor details should spoil a good story—and, anyhow, in their essentials the real facts are substantially as here recorded. In his earlier days he spent a number of years in Africa, as a medical missionary, and experienced many things which now seem stranger than fiction.*

LOOK out, boy! Him cotch yo'! Him cut yo' ea's off! Him powerful bad man!"

Several pickaninnies ran past the front porch of Dr. Moore's house, where the doctor and I were talking one evening, and from their terrified exclamations it was evident they had been up to some kind of mischief. As they disappeared down the street in the darkness Dr. Moore volunteered the information:

"They've been teasing old Orejar Rajar, I guess, and they are afraid he'll catch them."

"Who's old Orejar Rajar?"

"He's an old Spanish slave-trader, who lives around the corner, and the kids in town think he's a regular devil or some other kind of a monster. They take great delight in throwing stones at his house after dark, though they're scared to death of him in daytime."

" 'Orejar Rajar' is rather a queer name for a man; it sounds like Spanish and evidently means 'slit ears.' "

"Well, that's exactly what they call him; he's got both ears slit all right. But his right name is Gonzales Lebresa; at least that is the name he is known by on the official records of our country."

"Who is he or what is he?"

"He is something of a mystery. He has been here ever since I was a small boy. Came to Monrovia just about the close of the American civil war, bought the block over there, built his house, and he and his old servant have lived there ever since. He seems to have plenty of money; he never goes anywhere, and no one ever comes to see him. Once every two or three weeks he gets a letter from a law-firm in England and sends an answer, and that is about all that anyone knows regarding him."

"He is evidently the recluse victim of village curiosity and gossip."

"Hardly now, except for the younger generation. We older folks have long since grown accustomed to him and no one pays much attention to him now. There used to be told stories of clanking chains and ghosts and all of that kind of nonsense, but no one except the children and a few superstitious persons keep the stories alive."

Stalking the Game

And while other topics intervened to check our conversation regarding the old slave-trader, my thoughts would persist in reverting to the matter of the slit ears, and I resolved to discover, if possible, the reason for the slitting thereof.

The next morning my "constitutional walk" was deliberately directed so as to lead me past the old man's house. It faced the east and the sun beat fully upon the vine-covered spacious porch, but nothing was to be seen of the slave-trader. Again in the afternoon I meandered that way, and to my satisfaction the old gentleman was sitting at a small table playing a game of solitaire.

A man apparently past sixty years of age, of medium stature, evidently well-muscled even after years of retirement from active life; smooth-shaven, but with a wealth of long iron-gray hair that was carefully combed down over the ears; and wearing a silken cap which held the hair in place. As I passed the gate and glanced in, my quarry chanced to look up at me. Our eyes met, and I very politely saluted him and bade him "Buenos tardes, senor."

My salutation was gravely acknowledged by a wave of the hand, but no sound escaped the lips. The next afternoon I again passed the house, but saw nothing. The third afternoon the old man was on the porch and not only returned my salute but spoke to me. When approaching the house the following afternoon I was surprised to see the object of

my study standing at the gate. Again my manual and verbal salutations, again the acknowledgment; and, although consumed with a desire to interview the old gentleman, it was, I thought, best to pass by rather than appear overly anxious to engage in conversation or as one seeking to pry into private affairs. For two days thereafter I kept away from the house, purposely, lest the impression be conveyed that an effort was being made to establish communication.

A Midnight Call

Shortly after midnight there came a vigorous rapping upon the door of the house where I was stopping, and in response to the landlady's query there came the question:

"Is the American doctor here? My master is taken suddenly ill and requires his services." Whereupon the landlady came to my apartment and informed me that the servant of Sr. Lebresa stood waiting at the door to escort me to his master's house.

Hastily I dressed, and picking up my medicine-case hurried to see what ailed my mysterious new patient.

"Buenos noches, senor," said I as I entered the sick-chamber.

"Buenos noches," replied the patient, "Habla Usted espanol, senor?"

"Ah, poquito, senor; muy poquito."

"Muy poquito? very little, hey? Well, then, you and I can speak the English, senor, for I can speak your language very well."

And then in very good English he proceeded to tell me his trouble, which, like many other sudden attacks of sickness, was acutely painful but almost without danger. In a few moments hot applications and an anodyne had relieved the pain. So, giving his servant directions as to the medicines left to be taken, I was preparing to return to my apartments.

"Not going so soon, doctor?"

"There is nothing more for me to do; you are feeling comfortable, you have medicines, and your servant is here to attend you."

"Well, never mind that, I sent for you in preference to any other physician because I believed you would not run out and tell everybody what you saw and heard here. You are an American, and although the Americans ruined my business I admire and have confidence in them. Many of my best friends are Americans. What part of the country are you from, doctor?"

"Northern; what is called the Middle West."

"That was outside of my field of operations."

And for half an hour we talked, until at last the welfare of my patient demanded a cessation of verbosities and, with the promise to call during the afternoon, I left him to the ministrations of his faithful old servant.

During the course of the afternoon a call was made and the old gentleman was found feeling very well; and, at his solicitation, the visit was prolonged until rather late, and then nothing would do but I must stay to tea. These professional visits gradually merged into friendly ones, and ere long the old slave-trader and I had become "old cronies" and were indulging in an exchange of reminiscences which led him to tell me many things of himself. One afternoon he brought forth two pictures for my inspection, photographs of two beautiful young women. While I was feasting my eyes upon their superb loveliness the old man murmured:

"My daughters."

"Your daughters!"

"Ah, yes, doctor, they live in England and I have not seen them since they were babies."

"Well, good Lord, man, why don't you go and see them? Why do you stay down in this God-forsaken country when you could be with them?"

"You forget my disgrace, doctor."

"Your disgrace? Why, everybody in England has long since forgotten your connection with the slave-trade. You certainly need not keep away on that account."

"It is not that, doctor; it is these," and he touched an ear. "You have been here in Monrovia long enough to have heard the stories that are told of me, and while you have never hinted at it I know you must have heard of the name of 'Old Slit-Ears' that they apply to me behind my back. Well, it is just because of my slit ears that I am living here in Monrovia instead of in England with my children. I am too sensitive to live among other civilized people who point out and jeer and ridicule my disfigurement, and I could not subject my daughters to the shame and embarrassment which my appearance or residence in their home would inevitably bring upon them."

A Cosmetic Proposition

"But, my dear senor, you need not let that keep you practically marooned here on the Guinea Coast. Your ears can be made as good as new. By modern surgical methods the edges of the slits can be brought together so accurately and caused to heal with such little scars that one could scarcely tell you

had ever suffered the indignity of having had your ears slit."

For fully a minute Lebresa gazed at me in dazed astonishment while he digested what I had said. Then, speaking very slowly and deliberately, he asked:

"Do you mean to tell me, doctor, that you can perform this wonderful surgical operation?"

"Yes, senor, it is a simple though rather delicate bit of work, requiring very careful and deliberate action on the part of the surgeon and much calmness and endurance on that of the patient."

"And when can you do this?"

"Any time, senor. It would require several days to prepare the fine sutures to be used in the work, and then to prepare your ears and head would take a day or two."

"What would you do to my ears and head?"

"Clean your ears thoroughly, shave your head and scrub your scalp."

"My ears are always clean," he asserted with some show of asperity.

"Not surgically clean"—and Lebresa was given a short lecture on the technical requirements of antiseptic surgery, which was just then being made known to the world.

"You shave my scalp. Suppose the operation is not a success; then I have no hair with which to cover my ears."

"In which event you will have to wear a wig."

"In which event I have to wear a wig; and there are no wig-makers on this coast. However, I believe I'll chance it. Many worse chances I have taken in my lifetime and won out. How would one week from today suit you? No! Today is Friday; we'll make it next Thursday, my boy, next Thursday, and may Allah attend thee and guide thy fingers in their work. Now let us play a game of *vingt-et-un*, to see whether you get a fee or not."

And the subject was dismissed as suddenly as it had come into our conversation.

The Split Ears Repaired

The following Tuesday Lebresa's head was shaved as smooth as a billiard ball, his ears and scalp were given a preliminary antiseptic scrubbing and wrapped in an antiseptic gauze bandage. This scrubbing was repeated daily, and on Thursday came the ordeal for the old man. My friend, Dr. Moore, had been called in as a necessary assistant to administer the anesthetic, and as Lebresa passed into the painless somnolence his last muttered words were about his daughters.

"Fix them up fine, doctor, for you know I am doing this for my babies; my babies, doctor, my ba——"; and he had lapsed into a condition which rendered it safe to proceed with the cosmetic operation.

For more than half an hour there was trimming and shaping, approximation and suturing, and finally the work was completed and the protective dressings and bandages applied. Slowly the old man came back to his senses. Once, to rouse him from his listless condition, I slapped his face with a cold wet towel; he opened his eyes, gazed stupidly at me and murmured, "You are not my baby; go away."

At last he came to his normal condition, after we had transferred him to his bed, and immediately was wild with curiosity to see his ears. But there was no trouble in convincing him of the impossibility of this and inducing him to wait until the dressings were changed the following day. When he did see the result of the operation he was delighted; and when ten days later the fine horsehair sutures were removed he bounded to the mirror and spent fully five minutes in examining and admiring his restored auricles, then danced and capered around like a child with a new toy.

"When can I go to England, doctor? When can I see my daughters? Good God, doctor, do you know I had long since given up all hope of ever seeing any of my family again? Years ago, before my babies were old enough to remember impressions, I left them with their mother to live in England, while I came to Monrovia, and I have never seen any of them since. They do not even know where I am. All communication has been through the firm of lawyers in London who look after my business interests. But now, praises be to Allah, I can go to them without bringing the blush of shame to their faces, without humiliating them. When can I go, doctor; when can I go?"

"Oh, possibly in a month or two; probably longer."

"Longer! Why, man, I may die before that time!"

"No danger of that, senor. But you must wait until the ears have grown solidly together; you must wait until your hair grows again, and you must arrange your affairs here. These are things that cannot be rushed; you know nature takes her own time about her own work."

"I am willing to await nature's healing of the ears, but the growth of the hair can be forced, and my affairs here can go to the

devil or anywhere else. You can have the property if you want it, for I am going to quit Monrovia forever."

Lebresa proved to be one of the hardest patients to control because of his impatience. In due course of time his hair grew to a presentable length and the ears attained a degree of cohesion where it was permissible to handle them as other ears are handled. Arrangements had been made for the sale of the property through Dr. Moore's business agents and word had been sent to the wife and daughters in England that in a few weeks the father would join them.

One day Dr. Moore informed me that he had received one hundred dollars for his services as my assistant, and remarked that I must have received a good fee. But I had not, nor had the matter been mentioned by either Lebresa or myself. The day arrived for his departure and with his luggage and his old servant we took him out to the steamer in a lighter-boat and bade him farewell. As we parted at the top of the gangway Lebresa grasped my two hands in his, the tears trickling down his face.

"My dear doctor, God knows how grateful I am to you for what you have done for me, and may His blessings always attend you. Here are some papers for you to read when you get ashore. If you should ever want to visit England they may be of some value to you. Goodby, my boy, and may the blessings of Allah be upon thee."

Half an hour later, in Dr. Moore's private office, our combined curiosity compelled us to examine the papers. These consisted of two pieces, folded twice, and the following note:

"My Dear Doctor: One day you suggested that I ought to write the story of my life, as it would prove interesting reading. I am going to do it. I have always kept a diary and a ship-log and can easily gather together and sort out enough material to make quite a story. When I get settled in England this shall be my recreation and I shall leave the manuscript to you as an inheritance, for I do not want my memoirs published until I am dead. My executors will turn them over to you.

"As to the surgical operation you have performed upon me, no money consideration could express my gratitude, but I am leaving with you the enclosed two small engravings, hoping that they may partially compensate for the worry and trouble caused you. In England I shall assume my correct name and drop from African life as completely as one dead, but my family, one and all, shall forever remember you as a good and true friend. Very gratefully yours,

GONZALES LEBRESA."

I passed the note over to Dr. Moore for his perusal and unfolded the two pieces of paper. My amazement was apparent, and in the acute transitory paralysis which seized upon me they slipped from my hands and fluttered to the floor. Dr. Moore picked them up.

"One thousand pounds each! Two thousand pounds on the Bank of England! Whe-e-e-ew! Sa-a-ay, mister! The next steamer leaves in two weeks!"

One morning, some years ago, the newspaper in my home city chronicled my homecoming from a winter's sojourn in the West Indies. About ten o'clock my telephone brought me a request to call at the offices of a prominent law-firm, where, after certain perfunctory preliminaries, there was turned over to me a sealed package of papers which the lawyers stated had been entrusted to them by an established firm of barristers of London, England, to be delivered unopened to me in person. When opened in the privacy of my library, the contents of the package turned out to be the "Story of Gonzales Lebresa, a Slave-Trader," who has been brought to the notice of my readers in this rather prolix narrative of my first large fee.

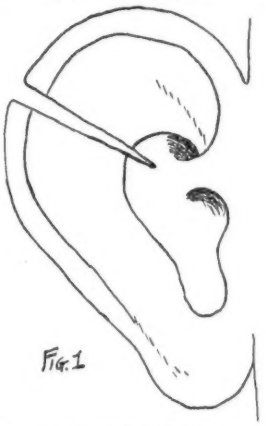
The Remedial Operation for Lacerated Ears

The drawings show the lacerated ears described in the story of Gonzales Lebresa. In this case the lacerations were really slits cut in the ears with a sailor's sheath-knife and allowed to heal by granulation, without union, and with the infection and suppuration usually found in such cases. The remedial operation consisted in freshening and smoothing the edges of the cuts under aseptic conditions and then sewing together the divided parts, using horsehair or very fine silkworm-gut sutures.

To secure the best possible coaptation of the irregular surface, the peripheral stitch No. 1 is inserted first, at the *outer* edge of the helix. This insures smoothness of the contour of the ear in a place where any irregularity, offset or notch would be very conspicuous. Next the central stitch (2), in the antihelix, is inserted. Then follow the others, as many as may be needed to insure cosmetic coaptation.

These stitches include only the skin and do not pass into the cartilage of the auricle. Having secured the best possible coaptation

on one side of the ear, follow the same course on the other side. The sutures are not tied upon insertion, but the free ends are held in

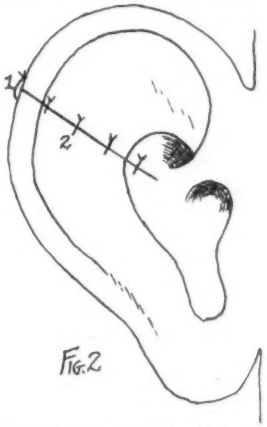


Frontal aspect—Ready for stitches

hemostats until all are in place and the effect of the whole can be noted. If the coaptation be satisfactory, then the sutures are tied and the ends cut short.

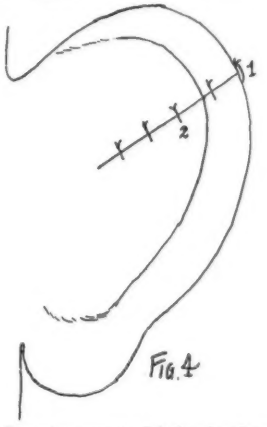
Posterior aspect—Ready for stitches

These two sets of sutures will maintain the cartilage edges in apposition so that good union will result. The sutures should not be removed before the seventh to the tenth day, depending upon the progress of the union. Aseptic dressings are to be applied,



Frontal aspect—Stitches in place

and changed as often as necessary. In a case of fresh laceration, the procedure is the same as in old lacerations—*sans* the freshening of the edges. After the stitches are removed care should be exercised in handling the ears lest the cartilage be torn apart along the line of union.



Posterior aspect—Stitches in place

Four Rare Cases

Infantile Hernia; Fracture of Femur in Infant; Anthrax; Fracture of the Sternum

By E. GARD EDWARDS, M. D., La Junta, Colorado

THE following cases are presented solely because of the rarity with which they are likely to occur in the work of the general practitioner or the specialist.

Strangulated Hernia in an Infant

1. Authorities inform us that strangulated hernia in a subject under three years of age is practically unknown. This patient, aged eleven months, suffered from a congenital hernia. The attending physician, consulted to relieve an attack of colic (so called), diagnosed strangulated hernia, basing the diagnosis on the continued pain, vomiting, and an irreducible lump in the right inguinal region. The latter persisted after taxis under chloroform and the continued application of an ice-bag.

X-ray of fractured femur in a child of two months

Operation showed a typical strangulation, with the bowel in a semigangrenous condition. As nearly as possible, considering the embryonic condition of the tissues, a Bassini operation was performed. Naturally, a recumbent position for the patient was impossible, and the child was dismissed from the hospital on the third day. In spite of the lack of rest, the end-results were good. Three years later there had been no return of the hernia.

Fracture of Femur (Infantile)

2. The patient, one of twins, a well-nourished child of two months, was lifted in the usual way by the mother, for the purpose of fastening a diaper. The mother thought that she heard a snapping of bone, but did not become alarmed until some hours later when an apparent bulging of the femur showed. Examination under chloroform gave the typical signs of a fracture of the femur.

Following diligent search of all available authorities was made and various methods of retaining the fragments were tried, none of which was successful. In spite of the utmost care, an ulcer developed over the site of the greater trochanter. Erysipelas followed, ending in the death of the patient.

Anthrax

3. The patient, a large well-nourished man of forty-eight years, while skinning a beef dead from anthrax, scratched the index-finger of the right hand. Within

The patient with the fractured sternum

twenty-four hours he was in an alarming condition but was assured by his physician that he had, at the worst, a case of "blood poisoning."

Upon his admission to the hospital, some forty-eight hours after the infection, he presented, even to the casual observer, a typical case of anthrax, including the edema of the tissues over the arms and chest. Microscopical examination of the contents of several blebs showed a positive and very typical infection.

In spite of drainage, by means of multiple incisions and the use of vaccine, the patient grew progressively worse and finally succumbed to the disease, four days after the inoculation.

Fracture of Sternum

4. Stimson gives the mortality of fractures of sternum as twenty-five percent. Beck confines his statistics to the bare mention that this fracture occurs in one percent of all fractures.

This patient, age 72, was thrown from a heavily loaded wagon, one of the rear wheels passing over the chest. He refused medical attention immediately following the injury, and twenty-four hours later, after a ninety-mile railroad journey, presented himself for treatment, and with the following symptoms: A palpable fracture of the sternum evidenced by mobility and a depression of at least three-quarters of an inch between the contiguous surfaces of the sternum; temperature normal; respirations practically normal but embarrassed; dyspnea absent; cough constant but without expectoration. Physical examination showed mucous rales throughout both lungs.

A photograph of the patient is submitted. A radiograph was not made, the diagnosis being apparently too conclusive for this procedure.

Reduction was made under chloroform anesthesia, following the method of the authorities, i. e., the patient prone, shoulders drawn back over the edge of the operating table with arms over head, upward pressure being exerted on the arms and downward pressure on the lower part of the chest by assistants. The entire lower part of the chest was bound as firmly as possible with adhesive plaster completely encircling the body. After the above procedure, there was approximately close union of the divided parts of the sternum.

Within one-half hour after the anesthesia, patient was removed to a nearby residence and the following day made a twenty-mile stage trip to his home. Relief from the cough was practically instantaneous and the end-result was recovery with a minimum of deformity.

Ingrowing Toe-Nails

By DR. P. COSMAN, New Haven, Connecticut

WE may divide the painful condition known as ingrowing toe-nail into two classes, namely, congenital ingrowing nails, and acquired ingrowing nails. The former condition is, of course, more difficult to treat than the latter, for the reason that it must continually be kept under observation, while the acquired condition can be cured absolutely, without fear of recurrence. Practically every physician has had occasion, I presume, to see or treat this morbid condition of toe-nails, and so, as the nail of the big toe is the one generally involved, we shall endeavor to give a concise idea of a rational treatment. If, however, any of the other nails is involved, the treatment is the same, only less complicated.

The first thing to do is carefully to clean out the hard accumulations forming under the nail's edge with a little sharp curette. If the doctor has not a special curette, he may use a small nose-curette. Now, after removing this matter, wash thoroughly with a 1 : 1000 mercury-bichloride solution, with strong small scissors or a nail-clipper cut away the upper corner of the offending side of the nail. If unhealthy granulations are present, do not clip or curette them away, for only unnecessary bleeding will follow. Simply apply burnt alum and dress the toe. This dressing should be renewed every twenty-four hours, until all unhealthy granulations have disappeared.

Only now are we ready to treat the offending nail edge itself. It is a fact that the root of the nail is very seldom involved, except when smashed; hence, in all ordinary cases we do not need to have a surgical operation requiring the patient to take an anesthetic or keep his bed.

Proceed this way: Wash and clean thoroughly the nail-grooves, dry with cotton, fill the groove of the offending side with salicylic acid, on top place just a little white vaseline, then bandage. Renew this process every other day until all the skin surrounding the nail-groove is snow-white. Now insert a small, long strip of thin gauze, and scrape away all the white epidermis around and in the nail-groove. It will be removed absolutely without pain. The reason for doing this is, that a very broad and deep groove is left in which we can better work and which, of course, leaves us the side edge of the nail free from its tip down to its base, or rather to the point where the root starts. At this juncture we take a long, straight, and heavy nail-clipper, or even a bone-clipper, push this over and under the offending nail edge down to the point where the root starts, and with a single clip the offending part is off. Mind well, in an experienced hand this whole operation can be done and without the use of a local anesthetic, or, as this method is absolutely painless, without the loss of one drop of blood. Fill up the remaining cavity with bichloride of mercury gauze, then bandage. Upon removing the dressing in a few days, the trouble will be entirely cured.

If now the party so cured will wear proper shoes and stockings, there is no reason for a recurrence of the trouble. I have permanently relieved hundreds of victims in this way and never have had a single recurrence. Your patient is more grateful to you than with any other proceeding, as he leaves your office and goes to his daily occupation without being obliged to have his nail mutilated, or being subjected to unnecessary pain.

I purposely do not use Monsel's solution or nitrate of silver in the nail-groove, since both blacken and dry the tissues, while the salicylic acid softens and whitens the tissue and gives it a better appearance, at the same time making removal easier.

When the trouble is a congenital one, the side edge of the nail instead of burrowing down into the flesh will spread beyond the allotted spaces, while its edge is not free but adherent to the flesh all over.

In such a congenital case, the first thing to do is to cut away the corners of the nail and then, with a probe, push a small bit of bichloride gauze under the nail on both sides. The idea is to let the nail grow over the gauze and so to form a free side-edge, which is essential to relieve this particular condition.

The gauze should be renewed every day for about two or three weeks. Then, as in the former instance, fill the grooves with salicylic acid and white vaseline, leaving it until the skin is turned white. After removal of this macerated mass of epidermis you will have a free edge; albeit, of course, it is an artificial one. This free edge should not be removed as in the other cases, but be kept lifted up by always having some gauze burrowed underneath. Only when in time the edge grows too broad, a narrow strip must be clipped off from the tip down to the start of the nail-root.

One fact to be borne in mind is, that in this particular condition, all the surrounding flesh is abnormal and much more painful than in the other class, and for this reason often a spray of ethyl chloride is necessary to deaden the intense pain; nor is the operation here always a bloodless one; still, if this condition is deftly manipulated, the suffering may be reduced to a minimum, and no disfiguration of the nail or the toe is necessitated by a painful and needless operation.

The technic in both instances is simple and efficient, and every doctor could take care of this class of cases without any trouble to himself or his patient, while the remuneration for this kind of work often is more than the average physician gets for a confinement case. So, wake up.

The condition known as "inverted toe-nail" is quite different from the ordinary form and does not require any treatment at all, only clipping away of the lateral edges of the nail. The hardened matter under the nail presses down upon the flesh setting up an irritation giving a sensation like that of ordinary ingrowing toe-nail. Another source of error in diagnosis is the presence of small new growths in and under the nail groove. Such growths sometimes resemble veritable tumors. These can be removed also without disfiguring the nail.

According to my experience, the ideal ethyl-chloride spray apparatus is the one in which, first, the spray-tube can be stood up on its end; second, every drop of the fluid can be used; third, it is made of glass, so you can see how much has been used, and how much is left over. This makes it superior to the metal tube. It is very unpleasant, indeed, to be spraying a toe and then suddenly have the spray stop because the ethyl chloride is used up — something that can not happen when one is using a transparent apparatus.

THERAPEUTIC NOTES

LECITHIN A "BLOOD BUILDER"

According to William Bain (*Lancet*), lecithin is a valuable remedy in the treatment of anemia and debility. When used experimentally in rabbits, it causes an increase in the number of the white and red cells in the blood and in the percentage of hemoglobin. Bain thinks that its favorable action upon the nervous system is secondary to improvement in the general nutritive condition.

OBJECTIONS TO STIMULANTS IN SHOCK

Dr. R. J. Thompson, of Tucumcari, New Mexico (cf. *Journal of the Iowa State Medical Society*, December, 1912) condemns the seemingly common practice of filling a patient suffering from shock full of strychnine, nitroglycerin and large doses of morphine. Many local physicians, he says, are entirely too free in the use of heart stimulants given hypodermically, and that it is a too common practice for us to sanction the free use of whisky in these cases.

UNPOLISHED RICE AND LECITHIN IN BERIBERI

Further experiments as to the prophylaxis against beriberi have been carried on in Dutch Guinea by Moskowski (*Arch. Schiffs- u. Tropenhyg.*), who, in order to prevent the disease, ordered the eating of crushed rice prepared with boiled *katjang-idoe*, the latter for better preservation.

Moszkowski agrees with Schaumann that beriberi is caused by lack of organic phosphorus. In his opinion, because of deficiency of the phosphorus, the lactic acid formed in the muscles is not combined and lactic-acid poisoning results.

This is an interesting theory—suggesting the value of lecithin in the treatment of early stages of this disease. We suggest to subscribers who may live in the Orient, where beriberi is one of the most serious and common of diseases, that they give this remedy a trial, in connection, of course, with a diet embodying unpolished rice and, perhaps, beans. Unpolished rice is beginning to appear in the American groceries, and physicians should force the market by urging people to use no other on their tables. Anyone interested may learn about the "katjang-idoe" by applying to the Department of Agriculture.

Why can we not have some reports on the diseases of the tropics and the Orient from our far-away friends? We have many of them.

DIURETIC ACTION OF DIGITALIS

Martinet (*Presse Médicale*, October 2, 1912) declares that the diuresis induced by digitalis is the result both of a stimulating action on the heart, manifested in an increase of the pulse pressure (the difference between the systolic and diastolic pressures), and a vasodilator action on the kidneys, most clearly indicated by a diminution in the diastolic pressure. The drug is thus both indirectly and directly diuretic. Digitalis tends to increase the viscosity of the blood; this after-resorption of the edematous fluid tends automatically to check the diuresis, which might otherwise become excessive.

COCAINE IN REFLEX INFANTILE DIARRHEA

The Prescriber for last December, abstracts a paper by Fuld, in *Sémaine Médicale*, on various methods of treating diarrhea. Since in a large proportion of cases the annoying persistence of diarrhea is due to reflex irritability of the gastrointestinal tract, the author has conceived the idea of administering small doses of cocaine combined with codeine, using a 3-percent solution of cocaine hydrochloride with an equal quantity of codeine phosphate in peppermint water, 10 drops of the solution to be given in water ten minutes before each meal. For children a 1-percent solution is used, one drop being given for each year of the child's age. In his experience with the method in fifty cases, the author found that two days of this treatment usually sufficed to effect a cure.

Nevertheless, it is not free from peril. Cocaine is a dangerous habit-forming drug. Codeine is a narcotic—and children are very susceptible to narcotics. More rational, much safer, and equally satisfactory is it to clean out the intestines with aromatic calomel, checking fermentation with the sulphocarbolates, washing out the lower bowel—withholding food until the canal is tolerant.

ANTISCARLATINAL SERUM

Zdravomysloff (noted in *The American Practitioner*, 1912, December) immunized horses against streptococci by means of streptococcic toxin and live streptococci. The serum obtained after four months' immunization was employed in severe cases of scarlet-fever. Six out of the seven patients showed marked improvement after the administration of the antitoxin.

We should hesitate to use living streptococci—chances of infection are still too great. A scarlatina-bacterin is now being marketed, for which good results are claimed. Meanwhile, do not forget calcium sulphide.

ADRENALIN FOR TYPHOID-FEVER VOMITING

Acting upon the suggestion of Sergent and others, that the suprarenal glands were inefficient in the course of infectious fevers, Dr. Khoury (cf. *The Universal Medical Record*, December, 1912) employed adrenalin in a case of typhoid fever with marked symptoms of myocarditis and arterial hypotension. At the end of two months, when the patient had been without fever for two days and the adrenalin had been omitted, obstinate vomiting set in, which resisted all ordinary means; even adrenalin by the mouth had no effect. However, after the hypodermic injections of adrenalin, twice daily, the vomiting diminished rapidly and had disappeared completely in forty-eight hours.

The author suggests that the vomiting of convalescence in typhoid fever may be due to suprarenal insufficiency and that adrenalin injections may prove an excellent means of combating this troublesome complication.

CALCIUM PERMANGANATE IN MALARIA

G. Arbour Stephens (*The Prescriber*, 1913, January) describes some interesting experiments on the effect of calcium salts on surface-tension. From these experiments he deduces the conclusion that it might be possible, by the use of calcium salts, to produce such changes in the human blood as to make it impossible for the malarial protozoon to live.

After putting this matter to the test, he found that a few malarial patients whom he put on calcium permanganate (administered in capsules) were greatly benefited, and this experience was confirmed in his further administration of the remedy. The patients received one capsule every four hours for three weeks.

Dr. Stephens says that in tropical climates this drug has the additional advantage of checking any tendency to enteritis, and that consequently it is of value if taken with water that is at all questionable.

REDUCING INCARCERATED HERNIA BY INTENSE COLD

In *The Medical World* for January, S. W. Brasfield says that he has succeeded in reducing an incarcerated gut in hernia by freezing with the ethyl-chloride spray. When trying to put the intestine back, where he fails to do so with safe taxis, he sprays the hernia until the skin freezes white, when many times the gut will slide back without any manipulation. Refrigeration by the use of salt and ice in strangulated hernia is much less convenient than by the ethyl-chloride spray.

See Dr. Brasfield's article in the January number of CLINICAL MEDICINE, page 87.

THE AGING OF ANTITOXIN

Many physicians have the idea that antitoxin deteriorates with age and that it is unsafe to use it after the "date of expiration" stamped upon the label. This, however, is not so.

As a matter of fact, diphtheria antitoxin actually improves with age. Freshly made serum is "raw," probably from the presence of various ferments. Such a serum is much more likely to cause serum-sickness or anaphylaxis than that which has been kept for a number of months. In the course of time these ferments slowly disappear, and the product becomes "mellow," as the antitoxin maker puts it. The more modern diphtheria antitoxin, which consists of a solution of the globulins, is aged artificially and the aging process is practically complete when it is made ready for the market according to the latest approved Banzhaf method.

Why, then, is the package of antitoxin marked with a "date of expiration"? It is because the strength of the product gradually diminishes. This loss of strength, or protective power, takes place most rapidly during the first year. At the end of this period there has taken place a loss of strength of perhaps 20 percent, under ordinary circumstances. In order to cover this shrinkage of strength, the manufacturer "loads" his antitoxin so that it shall be at least the strength marked upon the label after one year. For instance, a package marked 2000 units will contain 2500 units when put out, and 2000 units at the end of the year.

After the first year the loss of strength proceeds more slowly. If kept in a cool place (as it should be, of course), the shrinkage of efficiency the second year will run between 5 and 10 percent, and the third year about the same. Thus, a package marked 2000 units will contain, at the end of the second year, from 1800 to 1900 units, and at the end of the third year it will contain from 1600 to 1800 units.

The quality of the older antitoxin is absoutely unimpaired. Indeed, because it is "riper" and more "mellow," a serum two years old really is better than one three months old, although the strength will be considerably reduced. The dating required by the government is not intended to indicate the quality of the product. It is simply an evidence that it is of the full strength indicated on the label.

Dr. John F. Anderson puts the matter succinctly in the following sentences, quoted from "Hygienic Laboratory Bulletin," No. 66: "The opinion held by some physicians, that old sera or sera on which the returndates have expired should not be used is without scientific basis, and the only reason for not using such sera would be that a larger amount would have to be given to make up for the decrease in potency. Old sera, unit for unit, are just as potent as fresh sera, and would be, perhaps, less apt to cause severe serum reactions than fresh sera."

The moral is that the physician should not lose valuable time to secure new antitoxin, when the druggist's supply is running low. Use the old—but in "dose enough," always.

VALUE OF PERTUSSIS

E. W. Saunders, Walter Johnson, T. W. White, and John Zahorsky report, in *Pediatrics* for March, 1912, their results with the use of a bacterin, prepared from Bordet's pertussis bacillus, in forty cases of whooping-cough. They arrived at the following conclusions:

1. As a prophylactic agent, they have no hesitation in recommending the pertussis vaccine. While it is true that any infection will postpone or interrupt the course of pertussis, this agent alone will absolutely prevent it. The immunity is of uncertain duration, but the injections may be repeated, and it is of the utmost importance to postpone the disease until the first two years of life are past. The failures reported by other observers must be attributed to an impotent vaccine or to insufficient dosage.

2. As a remedial agent, success depends upon the promptness of administration and the freedom of the patient from complications at the time.

3. In no case should other treatment be withheld if indicated; especially in infants, who may be spared convulsions or bronchopneumonia by the use of emetics, sedatives, and some member of the aromatic group. It is quite possible that much better results may be obtained in late cases by the use of larger doses.

4. In view of the high mortality from pertussis in young children, a systematic effort should be made to determine the duration of artificial immunity, and to keep them protected.

THE BACTERIN TREATMENT OF TYPHOID FEVER

In a meeting of the French Academy of Science (*Paris Médical*, 1912, Dec. 14, p. 59), a report was presented indicating the decided improvement obtained in thirty-seven cases of typhoid fever by the employment of anti-typhoid bacterins. The authors had used more particularly the bacterins of Besredka, which contain living, sensitized bacilli. They call attention to the fact that the good effect of the bacterins is more marked the earlier the inoculations are made.

The success of this treatment is also emphasized in an interesting contribution to the *Gazette des Hôpitaux* for November 30, 1912, by Louis and Combe. They have employed the remedy principally for prophylactic purposes, and present a résumé of reports from literature, according to which the experience with more than twenty thousand vaccinated persons in the course of two years has determined the absolute protective value of the method.

GLEANINGS from FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M. D.

Sven Von Hedin and the Bible: Dr. Epstein's Last Article

EDITORIAL NOTE.—The last complete article prepared by Dr. Epstein was the short one that follows, translated from "Geistes-Kampf." Only about a week before his death he sent the manuscript to Dr. Abbott, with this little note: "My Dear Doctor Abbott: The above I thought suitable to strengthen a man's faith in God and his Christ. It did mine. Your ever grateful—Dr. Epstein." This anecdote of the great Scandinavian explorer, which throws into relief the religious faith of that remarkable man, also reveals something of the character of the man Epstein, which those of us who knew him can understand fully. Like von Hedin, he was an incessant reader of the Bible. A copy of the Great Book was always upon his desk, and he loved to pick it up whenever he had a moment's leisure. Not a day went by in which he did not take it down from its shelf, where he kept it convenient to his hand, to peruse some loved passage or settle some vexed question. If we wanted to know about anything that was referred to in the Scriptures he was our authority, and his interpretation usually threw new light upon our little problems. How appropriate, therefore, that the last written words that came from his pen for the journal that he loved so well should be a tribute to the Book that had been his faithful guide through his long and spiritually active life.

IN his travels of research into the interior of Asia the celebrated Swedish scholar, Sven von Hedin, had as his best companion his Bible. We read in his diary: "My library was not large; it consisted of the Bible, hymn-book, and a little book with the title, 'Words for the Day,' which formed a bond of union between me and mine at home."

When most of his companions and all his animals perished from thirst and he and the two servants that survived seemed to hasten to meet the same end, he writes thus: "It seemed then that most of my things were to be given up, and I therefore put together the things which I regarded as unreplaceable and indispensably necessary—my notes, and map routes, mineral specimens, sand specimens, charts, instruments, papers, as well as—my Bible and hymn-book." On a certain Sunday he writes: "Today we allowed ourselves to rest, and, as usual in a lonely morning hour, I read the sermon texts."

When he was in a time of death peril and found water unexpectedly, he confesses that the Almighty stretched out his hand over him and led him involuntarily and against his originally planned direction willingly to the place where he found water.

Sven von Hedin is therefore a new example of the fact that one can be an acknowledged scholar and scientific research-worker and at the same time a God-fearing man who holds fast to the Word of the living God.—From *Friedensbote*, in the *Geistes-Kampf*, December, 1912.

DR. EPHRAIM M. EPSTEIN

As already very briefly announced in last month's CLINICAL MEDICINE, page 187, Dr. E. M. Epstein, for many years in charge of the department of Foreign Gleanings in this journal, passed away on Sunday, January 26, at his home, 4535 North Lincoln St., this city. The funeral was held on Wednesday, January 29, and he was laid to rest in Rosehill cemetery. In addition to the private religious services, conducted at his home in the morning by Rev. A. H. W. Anderson, there were formal services in the afternoon by the Masonic fraternity, of which Dr. Epstein was a member, having attained to the highest degree conferable by this great order.

In the passing of Dr. Epstein the world loses an unusual man, one highly and broadly

educated, a most unique and versatile character who, as a thinker, was far in advance of the spirit of his time, leaving his impress thereon in ways that will reach ever deeper with the passing of the years.

Dr. Epstein, in closing his memoirs,under the caption, "Why Do I Live So Long," published in 1908 in THE AMERICAN JOURNAL OF CLINICAL MEDICINE, said: "Lastly, I look for the coming of the great, strong brother, Death, without enthusiasm, but also without dread, 'Into Thine hand I would commit my spirit. Thou hast redeemed me, Jehovah, God of Truth.'—(Ps. 31 : 6.)"

DR. EPHRAIM M. EPSTEIN

Dr. Epstein was a Hebrew of the Hebrews, of the highest, most erudite and well-to-do class. He was born in Bobrusk, Russia, March 17, 1829, his family soon moving to Brest.

In his memoirs, above referred to, as evidence of his unusual mental fitness for evolutional work, he says:

"At four years of age I began to attend private school, where I learned my Hebrew alphabet, and soon my prayers, with understanding, in Hebrew, and at eight years I was installed as synagog ritual cantilating reader of the prophets and the five scrolls in Hebrew from manuscript. And as these are written without vowels and peculiar signs of cantilation it involved considerable exercise of memory, and my father was very exacting in the performance. At the marriage of Alexander, then crown prince of Russia under the reign of Emperor Nicholas I, I delivered a Hebrew ode in his honor at the grand and ancient synagog of Brest Litovsk, my parents' that-time residence, in the presence of a great audience and the Christain municipal authorities. I mention these facts to show that my health and stamina in childhood were equal to the required mental exertion for these performances.

"My studies in the Hebrew Bible and the Talmud were pursued at home with private teachers, while the study of Russian and German were carried on by stealth and secretly.

"At my seventeenth year of age I married my first cousin, this being at the behest of my paternal grandfather, who bestowed the dowries on all his grandchildren and did not want to have this wealth to leave their circle. I will say that this kind of benevolent tyranny works neither health of body nor of mind.

"After our first child was born I determined, in 1849, to go to the United States of America, landing at New York early in 1850 after a perilous voyage by sea in a damaged sailing vessel, wherein we preserved our lives in a nine-weeks' struggle with waves, hunger and thirst. I spent but a few short weeks in New York, trying to earn a living, but was glad I did not succeed, for, though never inured to manual labor (and I was then already twenty years of age), still the ideal nobility of labor was cherished by me ever since in my youth my mind became liberated from the trammels of Talmudic haughtiness which makes its devotee presume himself to be superior to the common laborer. It was indeed not so in ancient times, but it was so in Russia seventy-nine years ago. And so I crossed over to Hoboken and plunged into the country beyond to Hackensack and soon found work.

"I was well received; work in the winter was not hard, food was plenty, and time

spared was occupied in learning the English language. I stopped on Squire Ackerman's place till after hay-making time. I had learned some farm work by that time and found another place with more wages, where I took care of a small country seat of about thirty acres for a family of a blind father, his wife and two kindly Christian daughters of mature age. It was the family of Judge Sherman of the Marine Court. I was here also treated very kindly and considerately.

"In New York I met a playmate of my childhood and early youth, who went to France long before I crossed over to the United States, and who a short time before me had arrived here. We used to meet on Sundays after I went to work in the country, either he coming to me or I going to him. With him I attended in the country one Sunday a Christian meeting-house, for the first time in my life. It proved for both of us the turning-point in our lives. We both joined the Christian church soon after. Friends began to increase, and there became no lack of means for me to pursue an educational career with the ultimate object of graduating as a physician; previous to which however I greatly desired to study Christian theology, and this course I was enabled to pursue in Andover (Mass.) Theological Seminary, whence I was graduated after a three-years' course, on August 17, 1856. I never regretted having given three years of the best of my life to it. As medicine relates to all physical sciences, so does theology, especially Christian theology, relate to all mental sciences, and the physician is not a loser by being a mentally trained man.

"After my graduation from the College of Physicians and Surgeons of the University of the State of New York, on October 31, 1859, I practiced medicine for a few years in Salonika and Bitoglia-Monastir, European Turkey, and then went to Vienna, to attend the clinics there. In the war of that country with Italy, in 1866, I applied for a medical commission in the Imperial Navy and was received, after passing a literary academic examination in the University Academy of Vienna.

"Being accepted, I was commissioned surgeon on board the Feuerspeier Battery, off Venice, Italy, and then on the corvet Seehund when it was present in the battle off Lyssa in the Adriatic Sea, July 20, 1866, under Vice-Admiral William Tegethoff against the Italian fleet under Admiral Persano, who had double our number of vessels and men. All the same we beat them, destroyed two of his best vessels, one of them the Ré de Italia, built in New York by General Webb, the other the frigate Palestro, and drove him away from the Austrian coast in an hour and twenty minutes. We had very few casualites. This was the first battle that was ever fought by ironclad propellers. The devotion of our men and officers to our great admiral won the day. It inspired me to write a description of the battle in English verse and I dedicated and presented it to the great admiral and man, who thanked me for it in an autograph letter, and said it reminded him of Byron's description of a sea storm in his Don Juan. I received a present of three hundred dollars from Emperor Franz Joseph for the poem.

"After the war was over I was intrusted with the supervision of a naval smallpox hospital at Pola, Dalmatia. The people of that part of Austria were generally ignorant antivaccination fanatics seventy-nine and more years ago. I had on an average sixty patients all the time, with some very severe confluent cases. After two months I was ordered on the cruising side-wheel steamer Dalmatia then plying on the Austrian Adriatic coast. I was on that duty for some months and then applied for dismissal in order to return to the United States, and was honorably discharged.

"In Vienna I fell in with some American friends who gave me letters of introduction to their friends at Leavenworth, Kansas, where I opened practice and continued there for some years.

"An old uncle who came over with me on my first trip to this country and then located in Cincinnati learned of my second arrival and began to urge my coming to that city and offered to afford me every facility to open a good practice. I accepted the offer and practiced there for nine years. In Cincinnati, April 29, 1873, I again married—this time Helena Dreyer taking my name and entering upon the duties and privileges, aye! the trials of home life—and we have had many.

"To us, in the passing years, were born Frieda, Julia, Zelda, Leo, Naomi, George, and Ruth, partaking strongly of the characteristics of their mother, twenty years my junior, whose sterling qualities have meant much to us all. In the last year of my residence at Cincinnati I met with the saddest event of my life, the death of my then only son, from my second marriage, five years old.

"I could not practice medicine any more, and I gave it up to accept a professorship in

Heidelberg College, Tiffin, Ohio. A religious disagreement with the faculty of the college, which was theological at the same time, made me sever my connections from it, and I went to Yankton of what then was Dakota Territory, and thence to Vermillion, to organize what is now South Dakota University, whose first president I was till sectarian and political chicanery ousted me, as it did a half dozen other men from the same office. A professorship was then offered me in Bethany College, West Virginia, which I accepted and continued for a few years in that capacity.

"I then relinquished the place to begin practice in the neighboring town of West Liberty, this being in the early nineties of last century. It was here that I became acquainted with the alkaloidal method of Burggraeve, known in France and elsewhere as the dosimetric practice of medicine, and which at my suggestion is also known in this country as 'alkalometry.' This has been successfully advocated and illustrated in CLINICAL MEDICINE as well as in its predecessor, THE ALKALOIDAL CLINIC of pleasant memory. I soon became a regular contributor to THE CLINIC, and when I became disabled for further country practice in 1898, I came to Chicago on the invitation of Dr. W. C. Abbott to recuperate my health. He kindly invited me then to become a member of the editorial staff, on which I am still active at this moment as the 'Gleaner in Foreign Fields' and in other departments.

"What was, what is, there in my favor? First of all, inherited longevity. Secondly, a moderate indulgence in all the appetites of life. Thirdly, the regular and pleasing literary life I am enabled now to lead these last ten years by the appreciative kindness of my friend, Dr. W. C. Abbott, in whose great work, 'doctors for doctors and a square deal for everyone,' I am proud to have my part and to whom, as strength permits, I give unstinted service and loyalty of my heart of hearts, only regretting that my years will not permit me to see, with the profession I love, the full fruition of the principles for which he stands."

In words no more fitting than his own can I tell "The Story of Dr. Epstein." In his own words the reader will get the "high lights" of his wonderful life.

To say that he has been an essential factor in this work of ours, to which he has given the latter years of his life, with strength only measured by his physical abilities, with a mentality acute and scintillating to the day of his death, and a loyalty beyond compare, is putting great facts, treasured in memory, into mere words that but feebly express half the feeling of his coworkers and associates toward their departed friend, who in going leaves a place in life's mysterious evolvements and in our work that, as an entity, never will be filled.

W. C. ABBOTT.

Chicago, Ill.

A TRIBUTE FROM DR. WAUGH

Everybody who came in contact with Dr. Epstein loved him. Surely, he could not have had an enemy on earth, for it was not possible that kindly heart could harbor a thought of ill-will toward any human being. I look back with pleasure to many pleasant hours spent in his society, when I had the opportunity to appreciate his kindly heart, immense erudition, and keen wit.

It does not seem possible to me that he indeed has been taken from us. It seems as if I must see his gray head bending over his desk, or meet him on his crutches, passing between his home and the editorial rooms of CLINICAL MEDICINE. Here he found that haven of rest to which every aging man looks. Before casting in his lot with us he had been sore buffeted in contests with the world, especially as nature had not fitted him with a warlike disposition.

Dr. Epstein was fortunate in having the evening of his life pass among men who loved and appreciated him; relieved from financial worry and stress, surrounded by books, and busy with the literary labors he so loved, and which he felt to be useful to his fellow physicians. His death coming so swiftly and unexpectedly was, nevertheless, a fitting end for an old age, rounded out and completed as his has been.

W. F. WAUGH.

Chicago, Ill.

FROM PROFESSOR JOHN URI LLOYD

It pains me greatly to learn of the death of Dr. Epstein. He was one of the scholars of the olden time whose education in the lines of optimistic humanitarianism was boundless, and whose scholarship was of the most erudite description. He was in every wise an idealist, concerned in the best interests of humanity at large, and in his death humanity at large will suffer the loss of an earnest and enthusiastic friend.

Several years ago Dr. Epstein visited his relatives in this city, including my old friend

Dr. Julius Greyer, and called upon me at the Lloyd Library, where he continued his visits for several days. We had long known each other by reputation, but from that time I counted Dr. Epstein my personal friend, and enjoyed the privilege of corresponding with him in various lines, which included an opportunity of going over his great work in manuscript titled, if I mistake not, "A Study of Moses," a work that I trust will not be lost to the world.

Dr. Epstein was one of the gentle souls of the world, kindly and optimistic, and will long be remembered by those who have had the good fortune to know him personally. The shock of the information conveyed by your letter is one from which I cannot easily recover. May I ask that you will extend to his family my sincere regards and sympathy in their bereavement?

JOHN URI LLOYD.

Cincinnati, O.

A COLLEAGUE OF MANY YEARS WRITES

Eleven years ago, when the writer came to Ravenswood, he found Dr. Epstein busily working at his desk in the one room it was possible to allot to the editorial staff of THE ALKALOIDAL CLINIC in the overcrowded old frame building which then housed it. At that time Dr. Abbott, Dr. Waugh, Dr. Epstein and the writer carried the burden, and their work was made delightful by the knowledge that they were carving upon the enduring rock principles which would ensure the success of practicians yet unborn. Then Dr. Burdick assumed the editorial chair, pushing THE CLINIC on to still greater things; and from time to time other men came to the colors, the many, like the initial few, working heart and soul to familiarize the great army of general practicians with the superiority of positive therapeutic methods.

Though already a septuagenarian when he came from West Virginia to join Dr. Abbott, "Father Epstein," as we younger fellows affectionately called him, came regularly to his desk and accomplished an immense amount of work. Some years ago he was thrown from a street-car and painfully injured, but even when confined to his bed he insisted upon having the foreign journals brought to him, and some of his best "gleanings" were contributed during this period. As he said, "when a man is in bed he has few distractions, and a light diet conduces to clarity of mind." No better illustration of the man's general character perhaps could be offered. He *loved to work* because his wide reading and practical experience enabled him to realize most keenly the importance of his labor to his fellow men.

And Epstein was essentially a humanitarian. He hated dogmas and despised circumscribed creeds, but he kept his soul in close communion with his God and believed he could best serve Him by serving "man made in his image."

To those favored with his friendship and confidence he displayed a half-humorous, half-cynical concept of modern civilization, which revealed a close study of men, methods and things, and while ever ready to expose sham and pretense he was prone to find an excuse for the ordinary frailties of the individual. Believing firmly in hereditary influences, he would point out when some man's shortcomings were brought to his attention that the poor fellow was really to be pitied for having ancestors possessed of undesirable characteristics, and go on to point out the necessity for careful character training and "selective mating" in order to insure the happiness and welfare of the coming generations.

Deeply read, scholarly, widely traveled, broad-minded and warm-hearted, Epstein naturally was loved by and made himself essential to those with whom he labored, and he can have no better epitaph than the sincere tribute of a colleague:

"He was a wonderful man and we shall miss him sorely."

GEO. H. CANDLER.

Chicago, Ill.

AS I SHALL REMEMBER DR. EPSTEIN

The first time I ever saw Dr. Epstein was just about eleven years ago, when I was the editor of *The Medical Standard*. One day an old gentleman, with a patriarchal beard—but his apparent age belied by the quickness of his movements and the intense keenness of his mentality—brought into my office the manuscript of an article upon "Nutrition as Now Understood." This was Dr. Epstein. The article was printed, running through two numbers of the journal, and attracted immediate attention. I recall that a few days after the first part of the paper appeared one of the best-known investigators of the problems of nutrition in the country called me up by telephone and inquired about the author. That was the beginning of a friendship between the two men that lasted

until Dr. Epstein's death. It was also the beginning of my own close, intimate relationship with the Doctor.

Two years later, when I came to Ravenswood to take an editorial position upon THE ALKALOIDAL CLINIC, I was happy to be brought into intimate association with Dr. Epstein. We became friends at once. For several years we shared the same office room, and never a day passed that we did not talk over the great problems of the Universe; and then I came to know something of the inner workings of my old friend's mind —perhaps able to look just a little beyond the threshold into his soul. Dr. Epstein's mind turned constantly to the great mysteries of life, death and immortality. He was essentially a mystic, seeing in the books that he read and in the greater book of nature many things of subtle significance which most of us, imbued with the material philosophy of the age, could not perceive; yet to him they were alive with messages from the Infinite. Next to the Bible, which he read constantly, I think his favorite author were that rare old middle-age mystic, Jacob Boehme, of whom the average twentieth century man knows nothing.

He was an idealist through and through. Modern materialism was to him anathema. It was foreign to his spirit, which was imbued with the imminence of the Divine. But he was not orthodox, as most people understand that word, and he was in no sense "behind the times."

He really lived in the library—in our editorial library and among his own books at home. He had several thousand volumes and monographs in his personal collection, and it was a rare privilege to be invited into his inner *sanctum librorum*. He had books upon every subject, his interest embracing the occult as well as modern science; including history, theology, medicine, fiction, all kinds of curiosa—in fact everything. He devoured them all. He once told me that he could read twelve languages, and he had books in nearly all these tongues. Old books he loved as men love old friends. A sure way to Dr. Epstein's heart was to give him another book—and he wanted it inscribed with the name of the donor.

Dr. Epstein had many friends, but nowhere were there those who respected more his marvelous erudition and loved him better than right here among his colleagues of the editorial staff of CLINICAL MEDICINE. We shall miss him for many a day; and we know that the readers of this journal will miss the good doctor's helpful and characteristic "Gleanings from Foreign Fields," which have been a distinctive feature of THE CLINIC for more than fifteen years. No man can replace him in this work—nor in our hearts.

A. S. BURDICK.

Chicago, Ill.

IN APPRECIATION OF DR. EPHRAIM M. EPSTEIN

When, some three years ago, the increasing demands upon the library of CLINICAL MEDICINE made it necessary to find somebody who could aid Dr. Epstein in his work as librarian and in all the manifold duties connected with that position, and when accordingly Dr. Abbott invited me to assume charge with Dr. Epstein, I first became personally acquainted with him, although I had, of course, known of him through his writings. Since that time I have been associated with him in almost daily contact, not only in the library but also in the capacity of his family physician; and the increasing tribulations of his great age made the latter association a particularly close one, although Doctor Epstein was unusually vigorous, if we consider that he had passed his eightieth year of life.

What impressed me most in him was the immense amount of information which he had stored away in his brain, and which covered a great variety of subjects. Not only was he excellently versed in the ancient languages—Hebrew, Greek, Latin, some Arabic—but he was equally at home in the speech of the moderns, reading and speaking Russian, German, English, French, to a less degree Italian and Spanish, and having at least a working-knowledge of some of the Slavonic languages. And what is more, he made constant use of these linguistic attainments, and his reading was as international as to languages as it was practically unlimited as to scope, and, I might say, as to amount. Doctor Epstein was always reading, unless he was writing. I have seen him, even when confined to his house by illness, at all hours of the day and night, lying on his bed, with the light arranged suitable and a copy of some book or journal in his hands.

Another point that was unusual, perhaps, and that was a decided characteristic of the man, was his thoroughness. He would not let a word pass by without understanding it fully, and without tracing it back in its derivation to the original source, and then he was greatly distressed when he found that the

present-day meaning of a term had strayed widely from the intrinsic meaning of the underlying root-word.

Personally, Doctor Epstein was a good and faithful friend, invariable in his kindliness and his appreciation of any service, however slight, that might be rendered him, always ready to be of assistance in those things in which his great erudition enabled him to aid others, always willing to explain, always anxious to learn; he managed to keep track of the modern acquirements of medical investigations and even to appreciate the difficult problems of immunology; in fact, this was his last work. The day before he died he had finished a rather ambitious article on the subject of immunity which he had adapted from a German work.

I shall miss the old Doctor's daily visits to the library. I shall miss his questions and his discussions, and I shall miss his kindly and sympathetic interest in what I am doing. One thing I regret particularly is that all the knowledge which he possessed must be lost, although it is stored up in the books which he left. It is a pity that men who have acquired a store of learning cannot transmit it or bequeath it to their successors. My close association with Doctor Epstein for the short space of three years has taught me much, and the memory of this friendship, though brief, will ever remain green.

H. J. ACHARD.

Chicago, Ill.

HE DIED RICH

We who were daily associated with Dr. E. M. Epstein can not express the debt we owe to him. We can but stand beside his grave and in the silence feel what speech can never tell. Now that he is gone, we realize more and more what a quiet, simple, unostentatious force he was. He was rich, and radiated his wealth to all with whom he came into intimate contact; for, more than almost any man I ever knew, he had acquired a wealth of golden thoughts, golden wisdom and golden deeds, and, above all, a golden character. And character is property. Such a character as Dr. Epstein had is a noble and valuable possession. Such a character is an estate in the general good-will and respect of men.

He carried inside of him that only which can make men truly rich and strong. His wealth was that of the heart and mind. He possessed that kind of wealth that stirred his mentality with a passion for expansion; that stimulated his hunger for learning and brought him into close communion with the great and the grand of all ages; a wealth that brought him into contact with nature and with nature's God, so that he felt the divine touch of science, and formed intimate relations with the entire universe. In many languages he sought the thoughts of men, and for himself he solved the problem of the world. He learned during his long and active life to infuse into his vocation and surroundings, no matter how humble they were at times, that high sense of duty and of beauty and harmony which transforms the common into the uncommon, lifts the artisan into the artist, and makes even dulling drudgery to seem divine.

Many times during the past year I have met Doctor Epstein as he slowly and apparently painfully dragged his weary body to his work, yet always with a happy, almost beatific expression of countenance; and I felt like saying with Schopenhauer, "The conclusion we come to is that the man whom nature has endowed with intellectual wealth is the happiest."

Dr. Epstein had passed on life's highway the stone that marks the allotted span, but, "being weary, for a moment he lay down by the wayside and, using his burden for a pillow, fell into that dreamless sleep that kisses down his eyelids still."

He has reached the place where success and failure are the same. But his character survives; his simple goodness lives.

So he died rich! And Nature lovingly above his grave in benediction holds her outstretched hands.

The lamp in the study is low,
The unfinished task is deserted;
The fervor of labor, the glow
Of high thoughts departed—
For his footsteps we tenderly yearn;
Oh! when will the student return?

The voice that inspired us is still;
At the fountain the pitcher lies broken;
The waters of life cannot fill
Its bright urn, nor be spoken
The words from a heart o'erspent
In the service to others lent.

Is he reading now in God's scroll
How thro' sorrow his Lord refineth?
Doth new knowledge reveal to his soul
How the maker designeth?
Let us think of our loss, not his own,
And the seed in Christ's vineyard sown.

GEORGE F. BUTLER.

Chicago, Ill.

MISCELLANEOUS ARTICLES

What is the Truth About Vaccination? A Discussion

DOES SCIENCE TEACH VACCINATION?

USUALLY your editorials are full of good sense, but when you tackle vaccination (page 4, January CLINICAL MEDICINE), like Issachar you crouch down under the burden. Not to be prolix, let me take one point only, i. e., that science teaches vaccination. As a matter of fact it does not, and every scientist who has taken a look has damned it; for example, Alexander von Humbolt, Herbert Spencer, Alfred Russell Wallace—the fellow-worker with Darwin—these will do as mere samples of many.

Another point is that real science cannot endorse the practice because of the insurmountable obstacle that it does not know what vaccine virus is, as Dr. William H. Welch of the Johns Hopkins recently admitted. This is further shown by the fact that apparently no one knows what it is, not even the vaccine farmers, for did not the Agricultural Department trace out the fact a few years ago that vaccine stock was the cause of the million-dollar epidemic of foot-and-mouth disease?

Also, if science endorses the practice, how does it account for the near 18,000 deaths (United States Government report), and no one knows how many cases, in compulsory vaccinated and revaccinated Japan, *à la* Germany? Do not take this ancient practice, which was originally the worship of a Hindu god, on faith alone, but investigate it in the light of science.

E. P. ANSHUTZ.

Philadelphia, Pa.

[Dr. Anshutz is editor of *The Homeopathic Envoy*.—ED.]

HAS NOT PRACTICED VACCINATION FOR FORTY YEARS

I have been a reader of your journal since ts inception. I am a believer in and a practitioner of scientific medication, as advocated by you, and it has added pleasure to an arduous life. But occasionally you put yourself out of the way to rap some of us who dare differ with you about matters that are not germaine to your line of work.

Your article on page 4 of the January issue, entitled, "Vaccination and the Unreasoners," is a case in point. The most surprising thing is that men of your breadth of view should be deceived by the fallacious arguments that are supposed to prove the value of vaccination; next, that you should ignore the mass of evidence constantly accumulating, showing how injurious the practice of the rite is to many; next, that you should fail to recognize the fact that sanitation has been the main factor in the practical annihilation of smallpox. I protest that the last and final argument is not with the vaccinators—assertions to the contrary notwithstanding. Most of us who do not believe in the rite have practiced it, suffered from it, and, awake to its dangers, have arrived at our viewpoint by following along logical lines.

It is not becoming in you to dub those of us who differ with you in this matter as "unreasoning," as "fools," or even as "fanatics." If you ever have occasion to stand by the bedside of your own little ones and see them go down to the borderland of death by vaccination, and by your own hand, as I have done, it will take something more persuasive than being called a fool to make you feel that you do not know its dangers, or to cause you to aid, either directly or indirectly, in forcing this disgusting and dangerous rite upon others. If you must call us names, for lack of argument, we have the consolation of knowing that there are a host of noble men and women who are with us, and who show a normal mentality in every other direction, even to you.

I practiced vaccination for five years of my early medical life, and I did it conscien-

tiously. I have refused to do it for forty years in order that I might live on good terms with myself. I have suffered financial loss, been called a fool and a fanatic, but I have not slain any of the innocent, and I am content. The time will come when you will realize that the "great white plague," which you are aiding to lessen, will never be eradicated until one of its main causes, vaccination, has been made an offense against the law.

It is no more than right that my protest, incomplete as it may be, should be given equal publicity with "Vaccination and the Unreasoners."

E. M. RIPLEY.

Unionville, Conn.

VACCINATION: DR. SLEE REPLIES

In replying to the communications of Doctors Anshutz and Ripley, who have expressed their views concerning the protective value of vaccination as a preventive measure for smallpox, I do so with a full realization of the unquestioned fact that every man has the right to formulate and hold such views as he may see fit.

I am answering them, not with any desire or intention to influence in any way the opinions of these gentlemen, but to show others that their deductions are not correct and therefore are untenable. To simplify this process and to save space, I shall take up each letter by itself, answering separately the statements made therein.

Dr. Anshutz says: "Not to be prolix, let me take one point only, i. e., that science teaches vaccination. As a matter of fact it does not, and every scientist who has taken a look has damned it."

This statement is incorrect. Dr. Anshutz *might* with propriety say that certain scientists have damned it. He has mentioned, specifically, Alexander Von Humboldt, Herbert Spencer, and Alfred Russell Wallace. Why go to the graveyard for illustrations? and pray tell me what are, or were, the special qualifications that rendered these men capable of forming judgments of special significance in connection with this subject, at this or any other time?

Alexander Von Humboldt died in 1859, before any of our modern biologic discoveries were made. In spite of his fine scientific work, were he alive today there is not a curator or laboratory worker in any of our natural-history museums but could give him "cards and spades" in the scientific knowledge of this age, and could tell him of inventions and discoveries of which he, in his day, had no conception. That he was a brilliant mining engineer and traveler in the latter part of the eighteenth century is an unquestioned fact; but of what use would his mining knowledge be under present conditions, with our mines over two miles deep, with electrical machinery, with artificial ventilation, working through quicksands, in caissons, under compressed air, and with the thousands of other changed conditions that now pertain to the branches in which he was then a specialist? Should he return to life today, he would be an ignoramus in the branches in which he was once an expert. This being true, of how much value would his views be upon topics that are entirely outside of his own sphere?

Herbert Spencer! Who was he? Born in 1820; educated as a civil engineer; then taking up literature; then philosophy. Later he attacked problems of government, then sociology, then physiology. Was he a trained physician? No, he was a mere dabbler in medicine, really less conversant with medical biology than thousands of educated men now living.

Alfred Russell Wallace last. Surveyor, architect, journalist and traveler; then going into natural history. What special qualifications or training had he or has he to pass upon purely medical topics? None. You say he was a coworker and contemporary of Darwin. True. Darwin was a wonderful man; so was Wallace. We are glad to give them credit for the work which their own discoveries and investigations qualified them for. But that did not make them physicians —not even homeopathists. Did it?

Are we without living scientists at this day? Specifically, I may mention the fact that Surgeon General Geo. M. Torney, of the United States Army; and Surgeon General Rupert Blue, of the United States Public Health Service, are both men of high scientific attainments. In their various Services, they have hundreds of highly trained, conscientious, clean-thinking, and observing officers. The officers of these Services, controlling so much of importance to the sanitary welfare of this nation, are unanimous in their belief in the efficacy of vaccination as a protective measure, and this belief is based, not upon the hearsay evidence of mining engineers, architects, journalists— or "cranks"—but upon personal observation and embracing thousands of cases of smallpox in hundreds of epidemics of that disease.

I could fill this page with the names of men who stand preeminent in the sciences of this and other countries who unhesitatingly and unquestionably accept the value of this agent, but the following letters will suffice:

WAR DEPARTMENT

OFFICE OF THE SURGEON GENERAL,
Washington, Feb. 4, 1913.

Dr. Richard Slee, Swiftwater, Pa.

DEAR SIR: In reply to your letter asking for a brief statement concerning my opinion of the value of vaccination in the Army, I am pleased to state as follows:

I think that no one who will consider with an open mind the sanitary records of the United States Army can remain for a moment in doubt of the vast and indispensable protective value of vaccination.

This country has been for so long a time partially protected by vaccination that this fact is not borne in on us with its full weight until we come in contact with nations or communities where, through lack of efficient sanitary service, vaccination has been as a rule neglected, as was the case with the Spanish possessions under our control at the time of the Spanish War. We found smallpox epidemic and very fatal in Porto Rico, and the military authorities enforced a thorough 'vaccination throughout the Island. The result was the absolute extinguishment of the disease, and no death occurred from this disease in the next ten years thereafter. This great change was not due to the sudden establishment of an efficient sanitary service in Porto Rico, because no provision was made for a health department in the hastily prepared organic law under which the Porto Rican civil government was organized at the end of the military occupation, nor had an efficient health department been created in that Island until last year.

In Cuba, also, prior to the American occupation, smallpox was widespread and very fatal. The American Government took control of the Island on January 1, 1899, and in the 13 years since then there have been only seven deaths from smallpox in Havana, and this is due to a prompt and general vaccination of the population and enforcement of this precaution thereafter. In the thirteen years before that date, however, 5355 persons had died of smallpox in the city of Havana alone.

The same is true in the Philippines, where smallpox was everywhere common before the American occupation and where now it is much less prevalent than in the United States. Without vaccination, it is believed that the American occupation of the Philippines and the suppression of the insurrection would have been a military impossibility.

Although the stations of the American Army are scattered over the United States, Porto Rico, Panama, Alaska, the Hawaiian Islands, and the Philippine Islands, and in this way brought frequently in contact with infection of smallpox, its protection by vaccination is such that the disease causes no concern to the sanitary authorities, which is shown by the fact that in the last ten years there have been in the entire Army scattered over this immense area only twenty-two deaths from this disease, which is an annual rate of three in every hundred thousand.

GEORGE M. TORNEY,
Surgeon General, U. S. Army.

Washington, D. C.

TREASURY DEPARTMENT

BUREAU OF THE PUBLIC HEALTH SERVICE
Office of the Surgeon General,
February 4, 1913.

Dr. Richard Slee, Swiftwater, Pa.

DEAR SIR: I am in receipt of your letter of the 1st instant, and in response to the request contained therein there are forwarded herewith Reprints Nos. 23, 57, and 60, from the Public Health Reports, and copy of Public Health Bulletin No. 52. In these publications will be found the opinion of this Service in regard to the prophylactic value of vaccination, arguments in favor of its use, and a synopsis of legislative provisions relative to this subject.

By direction of the Surgeon-General.

Respectfully,
J. W. KERR,
Assistant Surgeon General.

The reports mentioned above in the letter of the Surgeon General of the Marine Hospital Service are too voluminous for incorporaton in this article, and I will simply abstract the first page of a reprint from *Public Health Reports*, No. 57, entitled "Smallpox and Vaccination in the Philippine Islands," by Victor G. Heiser, Passed Assistant Surgeon, United States Public Health and Marine Hospital Service, Chief Quarantine Officer and Director of Health for the Philippine Islands; and Robert Oleson, Assistant Surgeon, United States Public Health and Marine Hospital Service.

At probably no time in the world's history has the efficiency of vaccination as a preventive for smallpox been so conclusively and effectively demonstrated as in the Philippine Islands since American occupation. The evidence of its value is incontestible. [Italics mine.—R. S.]

During Spanish times it was necessary each year during the dry season to erect in Manila a large temporary hospital to which the many hundreds of victims of smallpox could be taken. The great majority of them died.

During the past five years not one person has died in Manila from smallpox who had been successfully vaccinated during the five previous years; nor has anyone died of smallpox in Manila since June, 1909.

Since 1907, when the systematic vaccination was completed of the six Provinces, near Manila, which have an approximate population of 1,000,000 and which from time immemorial had an annual average mortality from smallpox of at least 6000 persons, not one person has died of smallpox who had been successfully vaccinated, and only a few scattering cases have occurred. During the past two years some deaths have been reported, ***but careful investigation shows that not one death took place in a vaccinated person.*** [Italics mine.—R. S.]

In May, 1904, the United States Army transport Liscum left Manila with 26 cabin passengers, 170 steerage passengers, 16 officers, and 80 members of crew, or a total of 292 souls on board. During the first week smallpox broke out aboard the vessel in an ***unvaccinated child in the steerage.*** An examination of the personnel on board ***showed that 3 members had never been vaccinated. Within a***

period of two weeks these unvaccinated persons were stricken with the disease and not one of the remaining persons contracted it. [Italics mine.—R. S.]

During October, 1910, information was received that in the remote town of Baler, with a population of 2417, situated on the east coast of Luzon, smallpox had broken out among the unvaccinated children. There were 100 cases and 27 people had already died. An average of 35 new cases was occurring daily. Through the efforts of the Hon. Manuel Quezon, Delegate from the Philippine Islands to the Congress of the United States, the people were induced to submit to vaccination. The number of new infections decreased rapidly, and 14 days after the last person in that town had been vaccinated, about October 20, no further cases of smallpox occurred.

In view of such reports, from such unquestioned, high scientific authority, need we go back a century for opinions on this important topic?

Continuing, Dr. Anshutz says: "Another point is that real science cannot endorse the practice because of the insurmountable obstacle, that it does not know what vaccine virus is."

This is readily answered by the example that it is only ten or twelve years ago that real science of an order which is supposed to be beyond dispute, namely, the science of mathematics, demonstrated without question the alleged fact that the conquest of the air by a heavier than air machine was an impossibility. These scientists proved conclusively that the corelation between the weight necessary to obtain the power and support of man in the medium which we call air was such that it would be impossible for man ever to fly. In spite of the fact that the science of mathematics could not accept it, the flying-machine is here.

It is true that we do not know what the active agent of vaccinia is, nor do we know by what method the contagion is conveyed. But this does not in the least detract from the accurate observations and experiences of fully competent observers that vaccine virus affords protection. It is only within a year or so that the specific infectious agent of syphilis has been discovered, and yet it would be absurd to say that the medical profession for the last hundred years or more has been unanimously mistaken in resorting to the administration of mercury and the iodides. We had no conception in the least as to the cause of this horrible disease, but we did know from practical experience how to treat its various phases, and the discovery of the causative agent, while most interesting and valuable, has not in any wise affected the methods of treatment in vogue previous to this discovery. And the value of cinchona (and quinine) in malaria was recognized and it was used successfully for a century or more before Laveran discovered the plasmodium.

The next question is: "Did not the Agricultural Department trace out the fact a few years ago that vaccine stock was the cause of the million-dollar epidemic of foot-and-mouth disease?"

Assuredly it did. But—foot-and-mouth disease is a disease confined to cattle. There is a question if it has *ever* been conveyed to human beings. While foot-and-mouth disease unquestionably did cause a tremendous money loss to the country at large, this is injecting into the discussion a matter with which we are not now concerned. The subject under discussion is the value of vaccination as a protective against human smallpox. The calves that are used and killed after the production of vaccine are also a loss to the country, in that their flesh ceases to be of value for food; but this is also an economic loss which we are not now considering.

Dr. Anshutz's next question is: "Also, if science endorses the practice, how does it account for the nearly 18,000 deaths (United States Government report), and no one knows how many cases, in compulsory vaccinated and revaccinated Japan, *à la* Germany?"

This same argument was presented several years ago before the Connecticut Legislature in an endeavor to secure the repeal of the compulsory-vaccination laws of that state. I answered that statement at the time, as I now answer it, by quoting from page 148 of the Public Health and Marine Hospital Service Reports for the year 1908. This report, under the heading of "Smallpox," reads as follows: "This disease here is always present in sporadic form in the rural districts, but during December there began in Kobe the most fatal and severe epidemic of many years. Most of the people attacked and *nearly all of the deaths were in the non-vaccinated people or those who had not been revaccinated, and the epidemic was a costly and sad lesson upon the danger and folly of neglecting the rigid enforcement at all times of vaccination laws.* Official statistics show a total to the end of May of 17,401 cases, with 5763 deaths of this disease." [Italics mine.]

Official statistics are only of value when correctly quoted and when there is no evidence of deliberate intent to misquote or leave unquoted such portions of said statistics as are opposed to our views. The statement is made that 18,000 deaths, according to

United States Government report, occurred in compulsory vaccinated and revaccinated Japan. *The U. S. Government Report calls specific attention to the fact that vaccination was not enforced and that the majority of these cases were among people who had not been vaccinated.*

Let me turn now to Dr. Ripley's protest. He states, "that the most surprising thing is that men of your breadth of view should be deceived by the fallacious arguments tht are supposed to prove the value of vaccination."

In answer, I say that we are not deceived by fallacious arguments. My own views are not based on arguments at all, but upon personal observation. For more than twenty years I have been a student and investigator of the subject of smallpox, and engaged in the commercial production of vaccine virus. During this period I have examined or attended hundreds of cases of smallpox. *In my experience, I have never seen a case of smallpox in a patient who presented evidence of a successful vaccination.* I have been successfully vaccinated a number of times, and have not the slightest fear of smallpox. I have slept in the same bed and been isolated and confined, during the whole course of the disease, in the same room with smallpox patients.

Dr. Ripley next states, that "We ignore the mass of evidence constantly accumulating, showing how injurious the practice of the rite is to many."

Again I find no necessity for accepting anybody's *views* in this matter. With almost twenty years of close daily contact with vaccine virus, I am saturated with it, and so are the members of my family. During these years we have of necessity employed many people, and not an employee has escaped vaccination. I have vaccinated thousands of patients, many of them children who have since grown to adult life, and who have been more or less constantly under my observation, and in not a single instance in my experience have there been any unpleasant results. Pure vaccine virus is absolutely harmless and innocuous, and we have no more fear of rubbing it into a cut on our hands than we do of so much distilled water.

Dr. Ripley's next statement is that "We fail to recognize that sanitation has been the main factor in the practical annihilation of smallpox."

The crediting to general sanitation of the diminution of smallpox is a fallacy. It is astonishing that men of keen minds resort to such a subterfuge. What is sanitation, this word we so juggle with, and with which we endeavor to cover all hygienic sins?

Sanitation, properly defined, is the application and enforcement of known and proved preventive measures, each measure directed specifically against some disease or some condition. Sanitation does not become most effective until we know either the specific cause of said disease or have proven by experience that certain remedial or preventive measures are effective. There is no such thing as a "prevent-all" sanitation. Sanitation is a vast accumulation of many efforts, and is of minimal value unless intelligently aimed in each instance at a specific condition or disease.

We all recall vividly the yellow-fever scourge which devastated the southern and eastern portions of this country. Did sanitation of itself avail? Were not rigid "shotgun" quarantines established, traffic of all kinds suspended, sections of the country put under martial law, and every then-known method of sanitary control established? Did all of these efforts lessen in one iota the prevalence and extension of the disease? No, not until cold weather killed the mosquito did the scourge cease.

Yellow fever today does not worry us. The discovery of the mosquito as the host and vehicle of transmission of the infectious agent of yellow fever led to the easy adoption of intelligent sanitary measures directed specifically against this carrier. As a result, yellow fever has been stamped out with little trouble. But, without the destruction of the mosquito, one might live in a marble palace, with the most up-to-date sewers and drains and with perfect water supplies. He might, in fact, have every possible condition of proper sanitation according to the very latest known methods, and yet he might become infected with yellow fever and die, just as he would were he living under the most unhygienic surroundings in a filthy hut.

Has sanitation reduced the ravages of measles, scarlet fever, and whooping-cough? No, not in the least. As an accurate example of the value of sanitation, we cannot do better than present the statistics of the Uuited States Army, abstracted from the Report of the Surgeon General for the year ending June 30, 1912. I have selected these because they are fair and accurate. The men comprising the United States Army are selected from all walks of life and from all sections of the country. They are stationed, as the Surgeon General remarks, in the United States, the Philippines, Hawaiian Islands,

Alaska, and Panama. Therefore, we have men who are more exposed to the contagion of smallpox, by far, owing to their frequent change of station, than are the majority of the people of this country, who are confined very closely to their home locality. To offset this exposure of the troops, we have the fact that their posts are under military discipline and rule, and it is practicable to secure the enforcement and carrying out of sanitary measures to a much more satisfactory degree than it is possible to do in the average small town or village, under untrained civilians.

During the decade ending in 1910, with a mean number of men of 677,250, we have the following reports:

DISEASE	NO. OF CASES
Smallpox	340
Typhoid fever	3,843
Measles	6,367
Mumps	18,170
Malarial fevers	92,966
Venereal diseases	119,728

For the year 1911, with the mean annual strength of 73,023 men, we have:

DISEASE	NO. OF CASES
Smallpox	5
Typhoid fever	57
Mumps	1.052
Measles	1,258
Malaria	1,832
Venereal diseases	13,468

With this report before us, will those who are opposed to vaccination against smallpox, and who state that such vaccination is without protective power, and that the diminution of smallpox is due entirely to sanitary measures, state why, if sanitary measures are of avail, we had only five cases of smallpox during the year 1911 in the United States Army, and 1258 cases of measles? If sanitary measures alone are of avail, why should we have 13,000 cases of venereal diseases? If we believe in contagion, that is the carrying of infectious agents by contact, we should expect, upon the introduction and enforcement of the socalled sanitary measures, that venereal diseases would die out in the same ratio as smallpox has.

You will say, of course, that the exposure to venereal diseases is very direct and knowingly accepted, whereas the exposure to smallpox is not as direct and is unknowingly acquired. This is very true, I will grant, but the fact remains that we must decide this question: Is sanitation as commonly used of itself of value in the eradication of any contagious disease, unless measures are specifically applied against the disease under consideration? I have been engaged in sanitary work all of my professional life, but with the exception of the protective inoculation by means of vaccination, I know of no sanitary measure that can be directed against smallpox, that is not at the same time in general terms directed against malaria, measles, mumps, typhoid, and venereal diseases. Therefore, if our arguments will hold water at all, the ratio should be the same.

You will probably say: "Well, if you ignore the beneficial results of sanitation as regards smallpox, and if vaccination is a protection against smallpox, why in the world should you have 340 cases in the United States Army during a period of ten years?"

In the first place, the most rabid believer in the prophylactic value of vaccination does not claim that the immunity afforded is absolute. There are certain human organizations which it is impossible to immunize thoroughly. We find it in our laboratory animals as well. It is their misfortune that they do not make antibodies, and never as far as we know, or by any known methods, can a perfect immunity be established in these cases.

Then there is another factor, and that is that the antivaccination propaganda has undoubtedly had a deterring effect upon many people, and in some instances this has reached out and touched even the American soldier. On page 102 of the Report of the Surgeon General of the United States Army, for the year 1911, under the heading "Smallpox" is found: "Two cases of smallpox occurred among the American troops. There was no death from variola nor has there been a death from this cause since 1906. Both cases occurred at Warwick Barracks, Cebu, P. I., and both men confessed to the surgeon, Lieut. Col. Woodruff, that though they had been vaccinated many times, *they had always scraped off the wound as soon as dismissed from observation, and the last, a severe case, had actually sucked the place to be sure the vaccination would not be successful.* It seems probable that the occurence of smallpox in the Army is to a considerable extent due to intentional avoidance of vaccination as a result of acceptance of the reckless misstatements of antivaccination propagandists." [Italics mine.]

It seems to me this evidence should appeal to any reasonable man. Two cases only occurring in the Army in a year in the Philippine Islands, with their vast mixed population, with smallpox rife in the Chinese, Japanese, and other nearby ports, and with smallpox more or less constant among the

natives! Think of it—only among the American troops, and in both patients although vaccinated, deliberate interference with the process of immunization resulted in a non-take, and also in the contraction of smallpox!

As another example of the protective power of vaccination, your attention is called to Page 249 of the Report of the Surgeon General of the United States Army, for the year 1899, where we read as follows:

Paragraph 846 provided that before recruits are forwarded from a rendezvous to regiments the commanding officer will cause the date and result of last vaccination to be entered on the descriptive and assignment card. Under these regulations, which have been faithfully carried out, the soldiers of the United States Army have received efficient protection from smallpox. Although this disease has prevailed in many parts of the country during the past *fifteen years—1885 to 1897*—and frequently with epidemic violence among the civil population in the immediate vicinity of military posts, there occurred only *20 scattered cases*, of which four were fatal, in a mean strength of *25,000 men*. [Italics mine.]

At the outbreak of the Spanish-American War, a large volunteer force was hastily organized, and the regiments of the Regular Army were as hastily recruited up to their strength on a war footing. The Army was in a few weeks increased from 28,000 to 280,000 men. Under these conditions it is probable that the requirements of the regulations as to vaccination were not as carefully fulfilled as in time of peace. It will be observed that the necessity for vaccination is left by the regulation to the discretion of the medical officer. In May, 1898, smallpox prevailed to a considerable extent among the colored people in many parts of the Southern states. It was known to be common also in Cuba and Porto Rico. The medical officers who were present at the muster of the regiments raised in the Eastern states, and who expected to be camped in the South and to see active service in Cuba and Porto Rico were probably more careful in carrying out the provisions of paragraph 843, Army Regulations, than the medical officers of the Western regiments, who did not have in anticipation an immediate exposure to infection. At all events few cases occurred among the troops in Cuba or Porto Rico. The regiment which occupied the Holguin district of Cuba during the stamping out of the disease, which at the time was prevailing extensively among the native population, *did not have a single case, although its members were constantly exposed to infection during the aggregation of the sick in extemporized post-houses and the disinfection or destruction by fire of vacated houses*. [Italics mine.]

It certainly is a most curious thing that regiments of green troops could go into the Holguin district, that they could round up a town where there were over two thousand virulent cases of smallpox, and that these raw boys, taken from the streets of New York and from stores, offices, farms, and other civil occupations, should have been put into this district, nursed the sick, buried the dead, cleaned up the streets and houses, and yet not a single case of smallpox contagion occurred among them. Sanitation cannot, by any stretch of imagination, be credited with the immunity which these troops enjoyed.

Smallpox was stamped out of the island of Cuba before any attempt was made or could be made for the introduction of sanitation. It is only to be regretted that protective measures, of the same value as vaccination against smallpox, could not have been at the same time introduced among the troops, and have saved the thousands of lives of the poor fellows who succumbed to typhoid fever, yellow fever, and other diseases. During this campaign *smallpox was absolutely the only contagious and infectious disease against which our troops were protected, and it was the only one of those prevailing at that time in the islands to which our troops did not succumb by the hundreds*.

In the island of Porto Rico, smallpox has been for centuries endemic, and between December 15, 1898, and February 11, 1899, 554 cases of smallpox were reported from 150 towns and villages. The disease existed in every direction and was a constant menace to the people and the material interests of the island. General vaccination of the population was inaugurated under Major Hoff, Medical Corps, United States Army, probably the most important undertaking of this kind that has ever been attempted. As a result of this work, within a few months 786,290 people were vaccinated in the island of Porto Rico without a single fatality, and smallpox immediately ceased to exist. This was before any attempted improvements in general sanitary conditions could be undertaken.

In a recent conversation with Major Ashford, Medical Corps, United States Army, now stationed in Porto Rico, and the man who has done such wonderful work in connection with the eradication of hookworm disease in that island, he told me about the marvelous results which these poor, uneducated natives have witnessed as a result of American intervention and the introduction of vaccination. These poor people were so impressed with its beneficial results, that today, upon the occurrence of an outbreak of any description, they literally flock to the various dispensaries and medical stations, and beg for the "Americano injection." They believe that all that it is necessary for the American physician or army surgeon so do is to "inject" them and they will recover, and you cannot persuade them otherwise because they have seen the results with their own eyes.

Last year, when the bubonic plague made its appearance in Porto Rico and a few cases occurred, the population clamored for vaccination against plague and over twenty thousand of the inhabitants received such protection—not only willingly received it but *asked* for it. They are much wiser in their day and generation than many of us whose social advantages have been far greater and whose brains are assumed to possess considerable reasoning power.

Dr. Ripley also says: "If you ever have occasion to stand by the bedside of your own little ones, and see them go down to the borderland of death by vaccination, and by your own hand, as I have done, it will take something more persuasive than being called a fool to make you feel that you do not know its dangers."

My answer to this is, that had you stood by the bedside of your dear ones, who unfortunately were without the protective value of vaccination, and nursed them through this loathsome disease, perhaps seen them die, unrecognizable masses of corruption, you would never again question its value. As a medical student, I was repeatedly vaccinated and felt perfectly safe during the epidemic of smallpox of some twenty years ago. I went away on a short visit to the country with a classmate who had not been successfully vaccinated. A few days later this young man developed smallpox, and I nursed him through the disease in a solitary country house without any conveniences, and under great hardships. The boy recovered, though for years thereafter his health was exceedingly poor.

Some two years later my marriage occurred, and I was then unaware of the fact that my wife and her sister had not been successfully vaccinated. Within three months after entering out home, my wife developed smallpox, and her sister, who was visiting us at the same time, likewise contracted the disease which I had unwittingly conveyed to them. No one can ever say to me that I do not appreciate what it is to stand by the bedside of those near and dear to me, and anyone who has seen or taken care of a case of smallpox can easily realize the heartbreaking anxiety of such an infliction at such a time. In my home at the same time was a young boy cousin who had been successfully vaccinated, and a German serving-maid who had recently arrived in this country and bore the fresh evidence of the emigration officials' vaccination upon her arm. It is needless to say that while we were all quarantined, and lived together in the same house, those who were vaccinated were not inconvenienced in the very least. Again, I am not quoting the views of others, but giving you my own observations.

You say that forty-five years ago you commenced the practice of vaccination, and that forty years ago you discontinued it. Forty-five years! Nearly half a century! In that time the world really has moved. There have been just two or three marvelous discoveries in medicine and the general sciences within that time. I might ask Dr. Ripley if it has occurred to him that forty-five years ago the principles and practice of asepsis and antisepsis were unknown. Does it occur to him that the unfortunate experience which he may have had at that time was in all probability due to an infection quite apart from the disease of cowpox, and that this infection *he* probably conveyed directly to his child by means of his own instruments or his own hands, or even through the vaccine virus?

Forty-five years ago our hospital treatment meant death in very many serious injuries, through hospital gangrene. Have our surgeons ceased to operate because of the terrible mortality which was *then* so universal? No, they have kept pace with the times and adopted the methods which have eliminated this scourge. Because of the appalling death-rate at that time from child-bed fever, has the obstetrician declined to continue the practice of his profession? No, he has adopted the vast improvements and discoveries that have been made along the line of cleanliness and prevention, and now he attends his labor cases with the reasonable expectation of a successful termination in every instance.

If one is so inclined, he may readily dissect any problem and make the facts fit his purpose. A few years ago a notorious infidel selected from the Bible certain passages and published them in pamphlet form. He was arrested on the streets of New York for the distribution of obscene matter—in fact, it was very obscene. Yet, this man could not be convicted because, without a single change in a word or punctuation-mark, he had simply lifted from the Bible certain portions which satisfied his evil intent. If any professional man wishes to base his present knowledge upon experience gained forty-five years ago, who can object; but is it consistent or right that he sould accept certain improvements in our science, and disregard others? He should keep fully abreast of the times in all.

I have purposely avoided repeating the wonderful statistics of Europe in proof of the efficiency of vaccination. The United States leads the world in scientific endeavor and discovery. Her trained medical men are without superiors anywhere, and I feel that my gray matter is still plastic enough to accept their statements and conclusions of this very minute, and not dig up "osseous mementos of another age now lying voiceless on my surgery stage" to bolster up untenable theories.

RICHARD SLEE.

Swiftwater, Pa.

ROTATION OF THE CHILD'S HEAD

It was with considerable interest, and pleasure as well, that I read the article on occiput-posterior positions by Dr. Rittenhouse in the January number of CLINICAL MEDICINE. However, I wish the Doctor would be a little more definite in his instruction as to the method of rotating the child's head. In my own experience, I have found grasping the face, after diagnosing the position, the most feasible procedure. I have never attempted rotation by means of the forceps. I should be pleased to learn whether Dr. Rittenhouse agrees with me regarding the "hold."

J. H. FORMAN.

New York, N. Y.

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[We referred Dr. Forman's inquiry to Dr. Rittenhouse, who very kindly wrote in answer:

"My manipulation of a right occipito-posterior position, in detail, is as follows: The woman lies lengthwise in the bed, with her right side near the edge. If preferred, she may be placed across the bed, with hips close to the edge, as in application of the forceps. The child's head is lying flexed, the occiput to the mother's right sacroiliac synchondrosis. Under complete anesthesia, I introduce my right hand into the vagina—very slowly so as not to lacerate the perineum. I slip the palmar aspect of my fingers up over the child's right jaw until the tip of a finger touches the child's right shoulder. The thumb now is over the crown of the head, which is lifted enough to make the maneuver possible. The head is then rotated a half circle, bringing the occiput to the L. O. A. position, the tip of the finger carrying the shoulder along.

"The direction of rotation might be either way, but I find it most convenient to make it in the same direction in which the hands of the clock move, that is, the occiput moves first forward along the woman's right hip, then to the left past the symphysis pubis. I have not tried passing the hand directly over the face. The side of the face seems to give more room."

Everyone should read Dr. Rittenhouse's article on the shortening of labor, which appears in this issue.—ED.]

WHISPERING IN THE SICK-ROOM

If there is any one thing more objectionable than another in the sick-room it is whispering or speaking in half-audible tones. It is well to cultivate a smooth, plain, natural voice and to speak so that every word can be distinctly heard and understood by the patient, thus saving him the strain of listening; for most sick people try to catch every word that may be said about themselves, and whispering creates an air of mystery that arouses curiosity. The patient very naturally concludes it has to do with his condition and, so, sometimes gets worked up to such a pitch of frenzied and overwrought imagination that a relapse or an unfavorable change of some kind is the result.

A half-audible conversation is still worse than the low whisper, as illustrated by the case of a woman of whom I know, who was slightly improved after a long and dangerous illness but still very weak physically and mentally. The woman heard her physician tell the nurse in an undertone—that is, as she interpreted what little she half-heard—"Our patient is sinking, I have no hope." In reality, the doctor had said, "Our patient, I'm thinking, is better, I have more hope." To her distorted mind, the conversation had been low in order to save her the shock of hearing her fate; and from that time on she did sink lower and lower, until death released her. She believed what she heard as she understood it, and later told the nurse there was no use trying longer to deceive her, as she had heard what the doctor had said. Explanations could not convince her to the contrary.

Even if there should be no unpleasant or fatal results, it is annoying and perplexing to have anything transpiring in the sick-room that the patient about half-hears and is left to conjecture the rest. It tends to shake the confidence in the physician. It is wisdom to tell the truth, while not necessary to tell everything that comes to mind. To be truthful and honest, will hold the confidence

of the patient. If you are never caught prevaricating, they will believe in you and have courage to obey your orders, no matter how difficult and unreasonable it may seem to them.

Well people who are of a suspicious disposition sometimes come near a nervous collapse by whispered conversation in their presence, fearing they are the topic; then what may we expect of one weak in body and mind, believing he is the subject of the conversation and racking his enfeebled brain to fathom the mysteries of what is being said.

Speaking in undertones in the presence of other people not included in the conversation is a disturbing element anywhere, and how much more so in the sick-room, where the rustling of a paper or even the low, almost imperceptible buzzing of a fly may prevent sleep that otherwise might be obtained. It would be unwise to administer opiates to induce sleep when it was possible to remove the cause of disturbance. Watch the conditions, and if there are any whisperers in the room turn them out, no matter how good friends they may be.

C. M. H. WRIGHT.

Poplar Grove, Ill.

PRACTICAL POINTERS FROM PRACTICE

In puerpural eclampsia try venesection and you will need very little medicine.

In slow, tedious cases of labor have your patient get on her knees in a properly prepared place near the bed and you will soon discover that her pains are more effective. Occasionally I complete delivery in this way. The pains in the back are not so severe.

I believe a nervous woman will do much better in an upright position. Don't be careless about your patient who is depending on you for treatment and counsel preparatory to confinement. See that her bowels and kidneys are in active condition, or you may have a case of eclampsia.

For severe pleurisy draw a blister over the painful area with Spanish-fly plaster and you will never regret it. Your patient will soon be able to draw a long breath.

In severe neuralgic pains or sciatica try dry-cupping over the pain; also paint over the nerve with iodine, and inject about 15 drops of chloroform near the nerve.

For cerebrospinal meningitis paint over the spine, from one end to the other, with tincture of iodine, two inches wide.

In typhoid fever use high enemas, with a colon-tube, of kerosene and warm water and note the immediate fall of temperature. Repeat every other day. Give plenty of the sulphocarbolate intestinal antiseptic tablets. The fever won't last nearly so long.

Give aconitine "to effect" in tonsillitis and you will materially lessen the severity of the attack.

If you are so fortunate as to have some money, invest it in good real estate, which is a good way to increase your income. Circulars soliciting investment in mining stock and nearly all other get-rich-quick schemes make good wrapping paper.

Doctors can collect their accounts better than any agency. Your debtors live close to you. Go after them in a friendly, but positive, way.

J. W. DIXON.

Hartsville, Ill.

APPLICATION FOR BARBERS' ITCH

The comparatively few instances of barbers'-itch (trychophytosis barbæ) that have come under my observation yielded readily to the following treatment: Thoroughly wash the affected area with good soap and dry. Then apply a mixture of equal parts of alcohol and solution of peroxide of hydrogen to which has been added bichloride of mercury, in the proportion of 4 grains to the ounce. The hydrogen peroxide seems to me to help carry the more powerful antiseptic into the infected areas about the hair-follicles.

C. E. QUINN.

Kokomo, Ind.

[Before making the application it is usually good practice to pull out the diseased hairs over the nodular areas with a special epilation forceps. Dr. Quinn's lotion "listens" like a mighty good one. Can anyone improve upon it? Citrine ointment (nitrate of mercury ointment) often acts nicely—though it generally requires reducing more or less with lanolin or lard.—ED.]

WHAT REBELLION MEANS IN MEXICO

[The letter which follows was received by The Abbott Alkaloidal Company some weeks ago, before the Diaz rebellion broke out. It is from an American physician practicing in Mexico. We print it because it gives a glimpse of the terrible suffering which the unhappy disturbances in that country have entailed. We withhold the doctor's name, for palpable reasons.—ED.]

Your letter of the 18th to hand. As yet I have not received the package but expect it will come later on. The reason I did not get the package the other time you sent it was that my home in Oregpe was robbed and blown up by the rebels and I myself was caught out in the hills, my horse and saddle taken from me, and I was three days in the mountains without food or water. I came near going under. I lost everything I possessed—clothes, horse, instruments, drugs, and, most terrible of all, my wife was murdered. I have been almost on the verge of insanity since that horrible of day August 28.

——.

——, Mexico.

GOITER OR GRAVES'S DISEASE: WHICH? THE TREATMENT

During several summers of late years my attention has been directed to the relative frequency of large necks in young women who are residents of a village in northern New York. When examined, the enlargement is found to be due to parenchymatous goiter. The thyroid gland is not extremely vascular. Occasionally the eyes are staring, but not noticeably prominent. The skin is pale. The menses are irregular. Nervousness is marked. Intermittent flushing appears upon the neck and face. The affection occurs sometimes with an apparent cause; sometimes without one.

The etiology of these sporadic, or endemic, cases of goiter is difficult to determine. It may be the water, although this does not seem probable, because it is very abundant, comes from a distant spring in the mountains, and, according to analysis, is of exceptional purity. The region itself is very healthful, with mountains on either side and facing a large lake.

One woman, with whose case I am familiar, has either a form of Graves's disease or else myxedema. A former patient, male adult who died about two years ago, had a pronounced soft goiter, but otherwise enjoyed good health.

Two girls at puberty, whom I have especially watched, and whom I placed upon iodide of iron, hydriodic acid, iodine, and tannin—believing for a time that they had simple goiter—apparently were benefited; but the size of their necks did not notably diminish. Then, through reading a circular containing commendations from prominent medical men in Germany, I was led to make use, in these patients, of arsenoferratose. After two months' treatment, the decreased size of their necks and their changed appearance and behavior, which both showed great improvement, impressed me very much.

I have not, hitherto, seen as good and rapid effects produced by any other treatment I have tried or observed in similar cases. I hope that the combined use of arsenic and iron in the preparation referred to, or another equally good, may be effective in a disease or diseases hitherto obscure as to nature and origin.

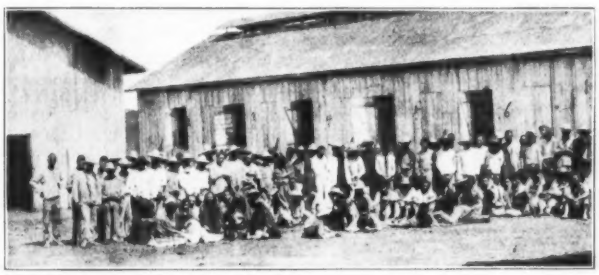
BEVERLEY ROBINSON.

New York City.

WORMS, OBSTETRIC WORK, AND OTHER THINGS AS SEEN IN MEXICO

I have been reading THE AMERICAN JOURNAL OF CLINICAL MEDICINE for several years, and I feel that there are many doctors more qualified to write articles than I, but I have greatly benefited by the journal and if I can help any I am only too glad to do so.

I read some time ago of someone who was asking for the age of the youngest baby in whom roundworms had been found. I was called to see a baby who was having spasms. It was 8 months old. After checking the spasms, I gave a worm remover (Barron's formula). The next morning the husband brought me six worms the baby had passed in the night; the largest was seven inches long. I should like to know how old that worm was.



Some of Dr. Todd's patients

In the July (1912) number, the paper on "Obstetrical Practice in Korea" reminds me of a case here last week. A Korean man (there are about 200 Koreans here) came and

said something about his baby. He could not speak English or Spanish, yet I knew it was something about baby, so I followed him home and found the baby had been born about four hours before. All was well, so after a clean-up I gave instructions how to keep clean and for the mother to stay in bed the proper period.

In the evening a little boy came to ask me to call again. I went over, thinking something had gone wrong with the woman; but to my surprise I found her up getting supper and the father in bed with a malarial chill. I finally persuaded her to go to bed, and I thought I made it clear for her to stay there; so I gave the man some medicine and went home. Next morning (no, I wasn't surprised, for I refused to be surprised any more) the woman walked into my office and said her head hurt. She had walked about three blocks to get to my office. Doctor, I should like to see you try to explain something to a Korean who does not understand any language you speak.

Doctor Stewart says she found the cord tied to an old shoe. I have found it several times tied to the mother's leg. Still, I have had only one case of sepsis in the past two years, and for the cure of that I give credit to the little granules of calcium sulphide.

In the July number, Doctor Rose speaks of a pocket-case for hypodermic tablets. The editor has added a list, and I am surprised to find, or rather not to find, one that my case always contains is not mentioned, namely hyoscine-morphine-cactin. I always use hyoscine-morphine-cactin as a general anesthetic, and it is useful for other things, but you are well aware of that.

I enclose a photograph of my morning clinic during the busy season.

E. B. Todd.

Santa Lucrecia, Vera Cruz, Mexico.

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[How could we have omitted the hyoscine-morphine combination? It is indispensable, indeed.—Ed.]

CICUTINE FOR SPINAL PAINS. SUGAR FOR FEEBLE LABOR-PAINS

I use cicutine, and usually combine it with macrotoid for nearly all those nagging and annoying pains of spinal origin. Three cases in which I am using it in today's work are these: (1) Paralysis agitans, with shooting pains in shoulder and arm; (2) agonizing pain in the back and down the legs, due to active Pott's disease, where morphine has almost no effect (the patient can fairly "eat" morphine!); (3) sprain of the ligaments and muscles of the lumbar spine, with irritation of the roots of the sciatic nerve. In all similar troubles the combination of cicutine and macrotoid seems worth remembering.

Here is something else—not original with me, but new to me. For those contraction-pains of labor when they get weak and fail to advance the child's head, a concentrated solution of ordinary sugar—a teaspoonful every five minutes—beats quinine ten to one. And why shouldn't it? It is converted directly into energy.

H. L. Harley.

Pleasantville, N. J.

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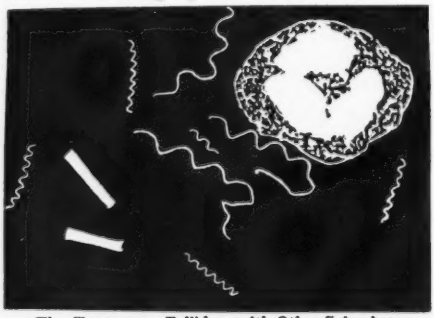
[Readers will remember the note in the October number (p. 1032) telling of the use the French make of sugar for promoting labor. Who of the "family" has tried sugar as an oxytocic?—Ed.]

THE TREPONEMA PALLIDUM

In response to a number of requests, a drawing of the treponema pallidum, as it appears in the ink preparations, is submitted herewith—it was impossible to get good photomicrographs.

The treponema is smaller and more delicate than the mouth-spirochete. Says Stitt: "It is characterized by its very geometric regularity in the spirals, which are deeply cut, and in focussing up and down continue in focus (like a corkscrew)." Jordan has described the turns in the treponema as "close and regular"; and to this I have repeatedly called attention since 1910, when I reported the use of the ink-method as one of the most accurate means of distinguishing this microorganism.



The Treponema Pallidum with Other Spirochetes

I have said so much concerning the appearance of this parasite, in other medical ar-

ticles and in my book on "Laboratory Methods, with Special Reference to the Needs of the General Practitioner" that I do not feel like taking further space here. The practitioner will gain much more by the study of actual preparations than by reference to drawings, although this crude diagram may give him a start in the right direction.

B. G. R. WILLIAMS.

Paris, Ill.

OUR LETTER FROM LONDON

The present aspect of the Insurance Act muddle is hardly promising. While it is stated that there are now a sufficient number of medical men consenting to serve throughout the country, to meet the needs of the insured, they are so unevenly distributed that in some places each insurance doctor has from 3000 to 5000 insured persons to look after, while in others there are only a few hundreds to each practitioner. Complaints of the service are growing and more than one inquest has been held in which disclosures tend to rouse considerable misgiving.

In one case in London a patient was seen twice by an insurance doctor and given medicine without any examination at all. He died in three days of strangulated gangrenous femoral hernia. In his defense at the inquest the doctor showed, to the satisfaction of the coroner and jury, that his time was so taken up with the clerical work involved in the public service that he had no time to attend to his patients, and was in fact losing all his private practice.

Other medical men complain bitterly of the exacting nature of the returns that have to be made in view of the class of practice that has to be done. Patients also are complaining of lack of attendance, and private practitioners who have refused to go on the panel tell me they are getting many insured patients who, having tried in vain to get attention from the panel-doctors, prefer to let their privileges under the act slide and pay for medical attendance on their own account. The insurance committees are trying to stop this in some instances by refusing to accept the necessary certificates for claiming sick-pay from any but panel-doctors. I feel sure that these evils will multiply to an alarming extent, and that an amending act will speedily become necessary in the directions that the medical profession have been standing for all through. But the bitter animosity that has been aroused in the medical profession will take a long time to subside.

According to the Paris correspondent of the *Lancet*, Dr. Louis Renon, in a paper before the French Society for the Scientific Study of Tuberculosis, spoke very highly of the use, either separately or in combination of peronin, thebaine, narceine, papaverine, and helenin, to allay the phthisical cough. Thebaine and helenin he considered indispensable. The best results, in Dr. Renon's experience, were obtained with peronin and thebaine, one centigram of each, helenin two centigrams. His method was to give two pills combined as above, with ten centigrams of sugar of milk, twice daily at intervals of five hours or less; but it seems not unlikely that the requisite number of separate granules given together or in alternation would prove equally effective. [Peronin is a synthetic morphine derivative, benzyl-morphine hydrochloride, resembling dionin, which latter is ethyl-morphine hydrochloride. Thebaine, narceine, and papaverine are three of the rarer alkaloids of opium, but all known for many years; they present no distinctive advantages. Helenin is a camphor obtained from elecampaine. It is a remedy of much merit and should be used more than it is in pulmonary affections.—ED.]

A very rare accident is reported in *The Australian Medical Gazette*, of November 23, 1912, by Dr. Thomas Fiaschi of the Sydney Hospital. A galvanized iron fence was blown down by the wind and struck a boy, age ten, above the crest of the left ilium. On examination a bony projection of the left sacroiliac synchrondrosis was noted, which was accompanied by crepitus on movement and severe pain when the left lower extremity was manipulated, although the movements of the hip-joint were unimpeded. There were no signs of injury to any of the pelvic organs. Under the x-ray, separation was observed at both the symphysis and the left sarcroiliac synchrondrosis, the bone appearing to be half an inch higher than normal in front and an inch behind.

The treatment consisted in fixing the pelvis under an anesthetic and holding the lower limbs apart while Dr. Fiaschi manipulated the displaced bone downward into position. A double spica plaster bandage with a strong pelvic band was then applied. While some displacement remained the boy did well and was able to walk with only a slight limp.

There is a danger in the airing of medical opinions in public. At the meeting of the West Riding Nurses' Association recently, Sir

Beckeley Moquihan, the well-known surgeon, strongly urged that no milk should be consumed before it was cooked. Nothing, he said, could be further from the truth than that milk is robbed of its virtues by boiling. Dr. Kaye, medical officer of health for the West Riding (Yorksline), on the other hand did not care two pins about boiling milk, provided it came from a good, healthy cow. As *The Westminster Gazette* remarked—not very originally—"Each authority has, of course, a right to his opinion, but how in the circumstances is the layman to decide?"

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A curious death by electricity happened recently in London. A gentleman fifty-two years of age was having an electric bath in an institution to which he had for some time been accustomed to resort for that purpose. After remaining ten minutes in an electric-light bath in which the temperature was worked up to 123 degrees, he was put into a cooling bath and a current equivalent to ten volts in the water, which should give a current of not more than two volts through the body, was passed. After six minutes he suddenly gave a shout and the attendant found him dead. The current was at once switched off and artificial respiration was practiced, but without avail. Presumably the guide-lamp on the switchboard had become crosscircuited, for it had gone out. In that case the unfortunate man received the full current from the main—about 240 volts. No defect could be found in the bath itself. This unfortunate occurrence suggests a serious danger that may lurk in the electric bath when charged from the street-mains.

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In the Bradshaw lecture, delivered recently before the Royal College of Physicians of London, Dr. David B. Lees, consulting physician to St. Mary's Hospital, said that in the minds of the majority of the profession the question of the proper treatment of pulmonary tuberculosis seemed to be summed up in the one word "sanatorium," to which some added also "tuberculin." While not decrying either, but admitting that what was included in the term sanatorium-treatment placed the patient under the most favorable circumstances for fighting his battle with the invading bacilli, it does not include any organized attack on the bacilli themselves. He made a strong plea for the scientific principle of the inhalation of antiseptic substances, and added:

"Medicine is both a science and an art; both must be cultivated with equal care and accuracy . . . . For the art to ignore the science is stupid; for the science to neglect the art is suicidal. The medical science which has any real claim to the name cannot be confined to the laboratory and its products; it must be constantly in touch with an ever increasing accuracy of clinical investigation. The results of treatment which claim to be 'scientific' must be tested, not simply by the assertion of the patient that he is better (have we not all heard of the spes phthisica?), but by diminution of pyrexia, of cough and of sputum, by increase in weight, and by careful observation and record of the physical signs."

To this end he showed a tabulation of 70 cases in which the subjects were treated by the continuous (day and night) inhalation of creosote, carbolic acid, and iodine dissolved in ether, alcohol, and chloroform; showing in each case the gain in weight at the end of three weeks and the total gain, the effect on the cough and sputum and the physical signs, and the result as to permanent capacity for work. There were 48 complete recoveries and 3 probably complete, 10 patients incompletely cured, 2 the final result of which is not known, and 7 died (one from apoplexy after recovery).

Dr. Lees's method is as follows: Yeo's inhaler is used with the following antiseptic solution; the inhaler being worn day and night except at mealtimes: Creosoti, drs. 2; acidi carbolici, drs. 2; tinct. iodi, dr. 1; spir. aetheris, dr. 1; spir. chloroformi, drs. 2. At the beginning, rest in bed is essential. Disturbances of the alimentary tract must receive appropriate treatment. A sufficiency of easily digested food, and malted milk mixed in scalded milk have proved invaluable. Attention to the hygiene of the oral cavity and teeth, antiseptic sprays for unhealthy conditions of the fauces; a spray of cocaine, eucalyptus, and parolein [liquid petrolatum?] to remove nasal obstruction. The total prohibition of smoking.

Dr. Lees gave full credit to the work of his predecessors and contemporaries in antiseptic inhalation, making special mention of the work of Dr. Beverley Robinson, of New York.

"M."

London, England.

SPARTEINE SULPHATE. CRATÆGUS

No books or works on practice or any other factor has been as much benefit to me in my work as THE ALKALOIDAL CLINIC, now THE AMERICAN JOURNAL OF CLINICAL MEDICINE. Each number contains *something* that not only is useful, but which I make use of.

Instance: your article on sparteine sulphate in the January number.

By the way, I've seen some wonderful results from tincture of cratægus oxyacanthus in cardiac dyspnea. What about its alkaloid? I. E. BURNETTE.

Danville, Ill.

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[Thank you, doctor, for your words of commendation. They are appreciated, and, what's better, they help keep us right "up to the mark."

Cratægus is an interesting remedy. Very little is to be found in the usual reference books regarding it, but there is an abundance of evidence that it has value as a cardiac tonic. An alkaloid, cratægine, has been isolated, but thus far has not been studied enough to warrant any dogmatic statements as to its value or its special clinical field. We are interested, and purpose to follow the matter up.

In a later letter Dr. Burnette writes: "I find cratægus most useful in dyspnea of cardiac or renal origin, in irregular but *rapid* heart action—while digitalis is indicated when the heart is irregular and slow. Boericke says in his 'Manual' that cratægus is useful in chronic heart disease, with extreme weakness; in very feeble and irregular heart action; in general anasarca; and when there are irregular pulse and breathing. It is also said to be of value in insomnia from heart disease, and in arteriosclerosis. Some of my colleagues do not get as good results as I do with it, and so condemn it. I find it most useful with old people, giving 10- or 15-minim doses of the tincture every three or four hours."

Doubtless many other physicians who read CLINICAL MEDICINE have had experience with cratægus. Who will report either successes or failures? Let's see if we cannot outline a logical place for this remedy as compared with digitalin, adonidin, cactin, and other cardiac remedies.—ED.]

SEVEN IMPORTANT EDITORIALS

We wish especially to call attention to a series of editorials, begun in this issue of CLINICAL MEDICINE with a paper upon the general subject of autointoxication. (See the first editorial.) Succeeding this, will follow editorials upon "Elimination," "Infection," "Nutrition," "Vasomotor Disorders," "Rest"—including sleep and pain—and "Vitality." These editorials are to be written by Dr. Waugh and will be of such a practical and helpful character, of such assured benefit to every reader of CLINICAL MEDICINE, that we urge you to watch for them from month to month and to read them closely. Keep them in mind. They will help as well as interest you.

BRUCINE AND BABIES

In the last September number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE you have a delightful article on brucine. I have been with you *ab initio* and learned to handle this companion principle of strychnine way back in the 18's. One great reason for this was that I could make it do its work. To illustrate:

A druggist once said to me that he didn't think much of phenolphthalein because he couldn't make it do as recommended. What had he to do with making drugs act? That is the work of the physician. But I said, "I can make it do just what it is recommended to do." In other words, I have learned to handle it. Again, it appears to me that some drugs will act kindly and efficiently for me, when my neighboring physician can't get results with them; they seem to be kind o' brotherly, "chumming" with you, while the other fellow can't get a thing out of them. I believe it. You are not called upon to answer. So I make phenolphthalein answer, and I also make brucine answer.

Brucine and I are partners in the fight for the "babies." See that "b"? It stand for both, "brucine" and "babies." See two of those "b's" in "babies," and "brucine" has one "too." [Ouch!—ED.] It is good for them. A long time ago I gave it to the babies because I was beat by strychnine, brucine's half-brother. See, those "b's" again? They are talismanic. I say I was beat by strychnine. So I took up the milder alkaloid and said over it the conjurer's formula of "b's" (" 'b' is for babies, and 'b' is for brucine") and gave it to them. A teaspoonful dissolved in water was given at a dose, and the little ones vomited it up right then and there, and I should have had to knock their little toots out of their jaws to get another dose down them. Fine, wasn't it?

"What's the trouble?" The baby looked at me as if he would say, "Taste that vile stuff yourself, doctor." And so I did, and I declare, brethren, I wouldn't take it myself; but I sweetened the solution to taste, colored it with a little carmine, and, behold, Master Babe drank the brucine nicely. And it has become the prince of babies' tonics with me.

Now, this is no joke, not one word of it. It's solemn truth, sweetened with a little fun.

I don't use strychnine with babies and old people, but I do use brucine.

You quote Wintzenried as saying that "no symptoms follow its administration by mouth." That won't do. If so, it is worthless as dirt and our time is worse than wasted in writing about it. No symptoms, no effect on the human economy. Then why give it? Why is this so? Because it is excreted as fast as absorbed. Granted this, and that may be the case with any drug. But as it goes through our physiology like a steel ball from a Mauser rifle it gets in its work. Mercy! but isn't that ball excreted as fast as absorbed? But how about the symptoms?

Again, how about the prince of tonics? How about the "b's"? No such "prince" and no such a "tonic." If there are no symptoms produced, excuse us. We feel that we have seen symptoms as the babies brighten into life and the first blush of the morn comes to their wan, faded cheeks and their little hands are extended for the tempting morsel that the glad mother has prepared to satisfy an appetite that this great brucine has brought about.

There may be much in the preparation of the drug that you are using. We have never used any other than standard granules, and we have had delightful success with it.

M. G. PRICE.

Mosheim, Tenn.

SKIN-CANCER AND A CANCER PASTE

I want to say a few words, through the columns of your great journal, about epithelioma of the skin. For the past two years I have been treating these little pests with the Bougard paste and have had most excellent results. I have given the subject considerable thought, and have learned much since I began to study the disease.

I shall not go into a thorough discussion of the subject of skin epithelioma, since many good practical articles have appeared in the journals and in recent works on diseases of the skin. I take it that the readers of THE AMERICAN JOURNAL OF CLINICAL MEDICINE are reading these articles and books.

It has been my experience that we should regard as suspicious any chronic sore appearing on the parts of the face appearing within imaginary lines drawn as follows: From the outer edges of the eyebrows on the sides, the upper borders of the ears above, and the angles of the mouth and the lobes of the ears below. When I see a sore situated within the lines designated I feel pretty safe in diagnosing it as one of skin-cancer. Epitheliomata appearing within this area as a rule are less destructive than in other locations.

These growths are easily treated by the regular practitioner at home, and I think we should keep our patients from going to the skin-cancer quack. The quacks have been taking these patients away from us.

Personally, I have had the very best of success. My druggist makes up for me a supply of the paste and I keep it on hand. The paste should be made by an experienced pharmacist, since it takes some time and much care to prepare it properly.

Here is the formula I use:

Wheat flour	oz. 1-2
Starch	ozs. 1 1-2
Arsenous acid	grs. 4
Mercuric sulphide (red)	grs. 20
Ammonium chloride	grs. 20
Mercuric chloride	grs. 2
Zinc chloride (crystals)	drs. 4
Hot water	oz. 1

The first six ingredients are thoroughly mixed. The zinc chloride is dissolved in the water and then the two mixtures are rubbed up together, *secundum artem*.

Before applying the paste the sore should be gently curetted, cleaning off all secretions or pus. If there is any tendency to bleed, which is usually the case, the bleeding must be checked before the plaster is applied, or the oozing blood will wash away the paste. I always apply a little adrenalin on a small piece of cotton, making gentle pressure.

The bleeding checked, I spread the paste on a small piece of cloth, being careful to cover the sore only. The thickness of the paste is governed by the thickness or elevation of the sore above the surrounding skin. With a spatula I work the paste up in a saturated solution of cocaine just as it is applied. The plaster applied, a strip of adhesive plaster is cut to cover and protect the dressing. The paste is allowed to remain for thirty-six to forty-eight hours. I sometimes put on a second plaster if I think the first did not reach the bottom.

The after-treatment is simple: The "cancer" will drop out within from six to eight days. Then the wound should be washed with a simple antiseptic wash every day for a few days, when the whole thing will fill in and heal up. It should be treated as any other granulating sore until the skin covers the place. As an application I use half a dram of balsam of Peru to enough lanolin to

make a smooth salve. The patient should be advised not to rub any of the plaster into his eyes. Sometimes the eye nearest to the growth will be swollen, but this does not amount to anything.

All the patients I have treated in this manner have asked me about the likelihood of pain. I desire to say that the cancer quacks generally use a salve that is very painful. The last patient I treated was an old man who had a cancer removed by a quack some years ago, and he told me the agony was something fearful. In contrast, he said the paste I used did not give him one moment's pain. I have yet to see the first person who has suffered severely under this treatment.

These patients are peculiar. They know quite a good deal about these cancers and are constantly reminded of their affliction by its persistency and the tendency of the sore to heal up or scab over, only to break down, bleed, and scab over again. Usually they read all they can find on cancer and talk to every quack in their reach about it, mostly getting an unfavorable prognosis.

I don't see why these sufferers cannot be treated by the medical profession for a fairly good fee. I usually charge from $15.00 to $25.00, being governed by the ability of the patient to pay.

I trust that I have been able to make myself clear in this little article. I shall be glad to answer any inquiry from any member of the "family" on any point that I am not plain on, or to receive any suggestion on this subject.

JOSEPH W. GREGORY.

Cisco, Tex.

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[Our readers will, of course, remember Dr. Tiffens' articles upon the same subject, which appeared in CLINICAL MEDICINE some months ago. Better look them up. I am sure we all appreciate Dr. Gregory's kindness in developing this important subject. We should all be students.—ED.]

DIABETES MELLITUS

I am undertaking an exhaustive research into the pathology, etiology, and dietotherapy of diabetes mellitus. I am very anxious to hear from every physician in the United States who has a case under treatment or who has had any experience in the treatment of this malady. Von Noorden says "the best treatment for the diabetic is the *food* containing the *greatest* amount of *starch* which the patient can bear without harm." If any physician who reads this has a similar or a contrary experience and would take the trouble to write me, I should esteem it a special privilege to hear from him, if only by postal card.

WILLIAM E. FITCH.

New York City, 355 W. 145th St.

MY TREATMENT FOR AUTOTOXEMIA

I am using the term autotoxemia as a general one to cover such other terms as acidemia, gouty diathesis, lithemia, uricacidemia, etc., and to cover a multitude of sins against self.

The subjects of it, whether belonging to the class known as high livers or not, are overlivers with lazy livers, since without exception they overeat and, according to my observation, are what I will call bile obstructionists; and bile obstruction means, among other things, the locking up of many poisons that otherwise would leave the system. Locking the bile-ducts is locking the intestinal tract.

The three great fundamentals in stopping this state of things and reinstating the patient is to move the bile, stop fermentation, and remove poisonous products already formed.

To move the bile, really nothing beats bilein. Give calomel and bilein in combination for a day or two, then follow along with bilein straight for some time, giving one or two hours after meals.

For the second indication, to stop fermentation, nothing beats calcium creosote, a combination of lime with creosote that admits of administering large doses of creosote without disturbing the stomach—doses large enough to act as a thorough disinfectant in the gastrointestinal tract (20 to 25 grains of pure beechwood creosote at a time and given every three hours). The calcium combination accomplishes this, and it is a happy one, since the alkali effect is what we need here and thus secured is not harmful the same as large dosage with sodium bicarbonate and some other alkalis. The interests of these two little giants are mutual, since the calcium fortifies and guards the creosote, and the creosote returns the favor for the calcium. Two more harmonious agents were never placed together. So calcium creosote ably fulfils the second indication.

The third—removing the poisonous products already formed—is no less ably met by saline laxative. And my advice is to keep it on hand.

To sum up: Bilein to move the bile; saline laxative to clean the house; calcium creosote to keep it clean. This proves good enough for the patient, and so it is good enough for me.

Under this treatment hardened arteries and what follows in their train are not to be feared, if the door is locked before the horse is stolen!

It is not always we can simmer down so close to a routine thing as this with three remedies.

A. P. REED.

Naples, Me.

MEDICAL LANGUAGE

The editor's remarks anent my criticism of the new method of spelling adopted by American medical journals (January, p. 77) are very important to me and I shall thank you very much if you will publish this, my reply.

The language of medicine is the result of its historical development. It evidently bears the unmistakable and, perhaps, indelible impress of the vestiges of these laborious, and not always salutary, influences. In the same way as almost the entirety of our occidental civilization has grown upon the soil of Græco-Roman antiquity, the chief constituent parts of the linguistic treasure of natural philosophy is contained within the confines of the classic languages.

The writings of Hippocrates, Aristoteles, and Galenos, as well as of Celsus, Plinius, and Vegetius are, and will remain for all scientists, the basis and test for correctness of language and for purity of Greek and Latin terms in the domain of natural philosophy.

It is by this means that these sciences still bear today the stamp of intercommunity, simplicity, and internationality, and this fact makes it an indispensable duty for every physician and natural philosopher to acquire a knowledge of these two languages.

Without a knowledge of etymology and the laws of word construction, a linguistic expression will not be retained in the memory; it possesses neither sense nor form, its relations and differentiations are unrecognizable and obscure, throwing the door wide open to arbitrary misconceptions and linguistic malformations.

Onomatology furnishes the real instruments for the operation of the mind. It is important that these instruments should be of the best; and it is, indeed, working in the interest of science, for the progress of science, when we exert ourselves to improve our onomatology.

The logic of science essentially adheres to scientific language. Science can not teach anything that is confessedly unscientific.

In science we have to distinguish three things: The series of facts which constitute the science, the ideas which recall the facts, and the words to express the ideas. The word has to develop the idea, the idea has to embrace the fact. Since the words preserve the ideas and transmit them, perfection in science is impossible without perfection in language.

However true the facts may be, however correct the ideas developed by facts, only wrong impressions will be transmitted so long as the expressions by which they are communicated are not exact.

These are some of the principles laid down in my writings, and they have been adopted now by others. In three countries—one of them is, *Deo gratias!* America—I have been appointed associate editor to medical dictionaries. Preparing my work of exposing all that is incorrect, unscientific, I examined a number of the popular dictionaries now in use, and for your readers' amusement I beg to give a little anthology of ridiculous terms that I have found.

Thanatopsie (a new word for necropsy or necroscopy), from *thanatos*, death, and *opsis*, the view. This is a typical case of a word coming by means of a lexicon. It is true, artists have painted death a skeleton with a scythe and hourglass, but in reality no mortal has ever seen death. The words post-mortem examination and autopsy are not as exact as necropsy or necroscopy; autopsy might suggest looking into a mirror.

Orchis, genitive *orcheos* (accent on the first syllable), is testicle; *orchis* (accent on the last syllable), genitive *orchidos* (accent on the second syllable), is a plant. The two are often confounded in our dictionaries.

The tendency to shorten, to concentrate medical terms, of which is so much spoken, is by no means adhered to. Ugly hybrids of great length are invented to take the place of pure and short classical names. For instance: sudonesis (half Latin, half Greek), instead of the good Greek hidrosis; stricturotome (half Latin, half Greek), instead of the good Greek stenotome; sinusitis (half Latin, half Greek), instead of the good Greek antrity; scaputalgia (also hybrid), instead of omalgia—and this is an exceptionally horrid example, because the correct and short Greek word is well known in the literature.

I could give an endless number of such examples, but will confine myself to one which is especially characteristic: cellulitis, which I noticed on the formulary for death-certificates. I wrote to our board of health, calling attention to the fact that these certificates should be serious documents and not contain such a funny word as cellulitis. It is a hybrid word, but even translated into Greek cyttaritis it would be obscure, because its meaning is supposed to be inflammation of the cellular tissue, and not inflammation of cell or cells. The Germans call it quite correctly *zellgewebsentzuendung*.

When we Americanize our technical terms, we entirely ignore the fundamental reason for the selection of the Greek and Latin vocabulary as the basis of scientific nomenclature. Medical science is international (not national); its specific terms should be comprehensible at sight, not only by those of the nationality in whose tongue any given medical communication is couched, but by all foreign medical men also. Germans cannot fail to understand, by anemia, inflation; by anemic, windy; by anesthesia, nudity or without clothes. Those who adopt the method of dropping the diphthongs because the French have adopted it demonstrate Darwin's theory.

A. ROSE.

New York, N. Y.

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[All of us listen to Dr. Rose, when he speaks, with respect and attention. His scholarship is profound and his love for the languages of antiquity provokes our liveliest respect. But—we are just as far from agreeing with him as ever. I think I do not exaggerate when I say that a very large percentage of the scholars of the world are seeking to simplify orthography instead of trying to make it more complex. French and German are far more nearly phonetic than English, but over in those countries the silent letters—the few they have—are being dropped. New words are coming into general use by the thousand, and even in our own public schools the time spent on the study of "spelling" consumes valuable time that could be employed otherwise to much better advantage. The same is true in medicine, in all the arts and sciences.

In this country we are not primarily interested in what a German thinks about our method of spelling anemia—we want to know what it means *to us*, and be able to use the term with intelligence, and not be compelled to resort to a dictionary every time we indite an article for the press.

English is English—it is the linguistic melting-pot, and we can not retain all the original forms from which our words were originally derived. If we must adhere with faithful detail to the inflections of Greek and Latin, then we should also be prepared to write pure Sanskrit, pure Hebrew, pure Arabic, pure Gaelic, pure Chippewa. The principle is the same, whatever the origin. But, *vita brevis, ars longa*—language is after all primarily a tool. Let us make it the most effective tool—not one of infinite complexity and difficulty in the use. With apologies to Dr. Rose, we yield the floor!—ED.]

PHARMACY INSPECTION FOR THE DISPENSING DOCTOR IN KANSAS

In the editorial section, page 210, of this issue, we refer to a bill to be introduced in the legislature of the state of Kansas, which if passed would affect the interests of the large number of physicians who dispense their own remedies. Thanks to the kindness of a reader of CLINICAL MEDICINE we have received a copy of this bill, known as House Bill 592. This is the proposed new pharmacy law of the state, providing, among other things, for the examination and licensing of pharmacists, and restrictions upon the sale of poisons and pharmaceutical preparations.

What interests the physicians of Kansas in this proposed law is the interpolation of new features, which we epitomize briefly, as follows:

1. Every physician who furnishes medicine will be compelled to write a prescription, to be signed and serially numbered to correspond with a similar number on the package or container. Such prescription must bear the doctor's own signature and must be kept on file in his office for inspection by officers of the state board of pharmacy. The emergency administration of drugs is excepted.

2. The bill does not prohibit the physician from dispensing such drugs or medicines as he sees fit, but said drugs must "comply with the Kansas food and drug law and be subject to inspection."

3. Every dispensing physician, like every druggist, is made responsible for the quality of the drugs or chemicals he dispenses; should he knowingly adulterate these preparations or cause them to be adulterated he shall be deemed guilty of a misdemeanor.

4. The state board of pharmacy is authorized and directed to formulate uniform rules

and regulations for the execution of the law, and to collect samples of drugs dispensed or offered for sale and to have them examined in the drug laboratory of the state.

While upon cursory examination the bill does not seem particularly burdensome, there are features which render it unsatisfactory to the medical and allied professions.

First, while the right of the practitioner of medicine to administer or supply needed remedies is distinctly admitted, no such exemption is provided for the veterinarian or dentist. According to a technical interpretation, members of these professions would not be permitted to administer or supply drugs of any kind except by the prescription route, "emergencies" (whatever those may be legally) being excepted.

Second, the requirement that the physician should write and file in his own office a prescription for every remedy he may give a patient in practice would be exceedingly burdensome. Every laxative pill handed out for immediate consumption, every cough lozenge, every headache tablet, every simple remedy given for minor ailments would require a separate signed prescription and a labeled and numbered container. Even in prescribing at the patient's bedside the convenient and time-honored "glass" would have to be laid aside and a container provided and a prescription written. The violation of any detail makes the doctor subject to fine or jail-imprisonment!

Per contra, so far as we can find in this bill *there is no provision* for the recording of sales made over the counter by the druggist who prescribes (as practically every druggist does) for simple or other ailments. He may sell (with containers or without container) laxatives, cough syrups, headache tablets, gonorrhea cures, kidney "cures"—indeed, anything not containing any of a specified list of poisons—as often as he pleases and in any form he pleases. Acetanilid and its combinations and derivatives are not included among the poisons. As a result, therefore, the druggist is left free to *practice medicine* as well as dispense drugs—and the physician may do neither *without the supervision of the board of pharmacy*.

Third, it will be noted that the execution of this law is to be vested in the state board of pharmacy, and that this board is authorized and directed to make "uniform rules and regulations," which are to have all the force of statute law and the violation of which, *as by the statute provided*, is punishable by fine and imprisonment, or both. Frankly, we are afraid of such "regulations." They open the door to beaurocratic tyranny, for such "regulations" may be made, and often are made, the means of burdensome and oppressive details which are difficult of observance and perhaps intended to be elastic enough to reach any socalled "offender" against trade-policies. With the greatest respect for the Kansas State Board of Pharmacy, which we have no doubt consists of an estimable body of gentlemen, it hardly needs saying that pharmacists and their representatives are not inclined to be judicial in their dealings with dispensing doctors, whom they regard as trade interlopers and whom by resort to legislation they have repeatedly sought to drive back to prescribing.

This bill has reached us only today, just as we are closing the forms of CLINICAL MEDICINE. We have not had time as yet to examine it critically or to make recommendations. Needless to say we do not object to proper testing of the doctor's drugs (although they are now being most carefully watched by the Bureau of Chemistry, of our national government). But we do object, and we know that every physician in Kansas will object, to having something "put over" without opportunity for every doctor in the state to understand it, and file a protest if he finds cause for complaint.

We advise every Kansas physician to write his legislators to hold up this bill until it can be discussed *in detail* in every county medical society.

TEXAS PHYSICIANS—PLEASE NOTE!

An antinarcotic bill which is objectionable to the great body of medical practitioners of Texas has been introduced in the legislature and favorably reported, if *The Houston Post's* report is correct. This paper says:

"The narcotic prohibitory amends the law so as to reach those who supply drug fiends under the guise of the practice of medicine. In this it restricts the use of it by doctors to a strict prescription basis and takes away the right of the physician to fill his own prescription. Towns of 3000 population or under where many reputable physicians own drug stores, are exempted."

Apparently this act is so planned that the dispensing doctor in any town over 3000 can not even give a patient a cough or diarrhea remedy. We advise every Texas physician, no matter how small his town, to write his legislators to hold up this bill pending further investigation.

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

WHILE, it is true, incalculable good has resulted from the promulgation of the germ-doctrine, it nevertheless has seriously injured scientific methods of thought; and this despite the supposed control-element in Koch's law. The theory, under the guise of scientific research, has led to special pleading of commercial value. Perhaps its worst effect has been the reduction of etiologic statements to a sort of "nickel-in-the-slot" contrivance: the helpless germ is put in, "it gets through," and nothing of the how or why is of any importance to the elucidator. The culture-medium is needed in the test tube, of course; but it is not needed in the body. No; for the germ creates all the elements of etiologic moment, the easy etiologist explains. Such crude pathology creates equally crude therapy.

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This fact is nowhere better illustrated than in the magazine exploitations of the buttermilk "cure" of old age. Buttermilk kills the germs, and old age disappears. This crude caricature of the views of Metchnikoff illustrates the distortion science inevitably undergoes through the neutral squint of the potboiler article. Metchnikoff lays stress on the fact that a man is as old as his arteries; that toxic products produce strain on the arteries; that germ action in the intestines creates extra toxins; that lactic-acid bacilli will interfere with those germs and, hence, decrease the strain on the arteries predisposing to senility.

Scientific as Metchnikoff's principles are, great as is the value of them pathologically and therapeutically, still they do not cover all the factors of the etiologic moment. The congenital potentialities of the constitution are not taken into account.

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Old age is a relative, not an absolute question, and, while to a large degree determined by environment—since paupers and moral imbeciles in a favorable rut live long—still, old age is determined by the impress made upon the fetus at the senile, or simian, period of womb-life. Arrest at this period of intrauterine development, through any of the processes which check development, may exercise peculiar influences upon the extrauterine development of the child.

When the arrest is produced by syphilis (which so frequently causes the senile appearance of newborn children), the child, because of organs that have undergone premature senescence, fails to pass through the first dentition or readily falls a victim to secondary infections. Precocity, whether of the intellectual or physical type, is an expression of arrest of development at the senile period, which causes the child to pass through the period of growth and senescence rapidly. Beside such obvious evidence of arrested development, minor expressions (such as the senile children described by Talbot and Souquest) occur. This may involve the skin alone, the rest of the system being comparatively unaffected.

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The truth of the popular opinion of precocity (early ripe, early rotten) is illustrated very frequently. Cratemus, a brother of Antigonus, was an infant, a youth, adult, married, begat children, and was senile in seven years. Louis II of Hungary was crowned in his second year, at fourteen had a complete beard, at fifteen was married, at eighteen had gray hair, and died at twenty. A ten-year-old boy, told of by Rhodiginus, impregnated a female. A boy born in 1741 had external marks of puberty at twelve months, and died senile at the age of five years.

The essential procedure to secure healthy old age is by guarding the arteries, kidneys, liver, spleen, and pancreas against the strain of toxemia.

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Buttermilk is an undeniable aid in this particular, but its exclusive advocacy is a nostrum-like abuse of an excellent adjuvant to proper dietetic and hygienic procedures. The old age of active intellectual life can be secured. For intellectual old age it is not necessary to adopt Goethe's satiric prescription, which he himself did not follow:

. . . The method is revealed:
Without gold or magic or physician,
Betake thyself to yonder field,
There hoe and dig, as thy condition;
Restrain thyself, thy sense and will,
Within a narrow sphere to flourish.
With unmixed food thy body nourish;
Live with the ox as ox, and think it not a theft
That thou manur'st the acre which thou reapest.
That, trust me, is the best mode left
Whereby for eighty years thy youth thou keepest.

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Climate, food, and environment produce types. This law works without discrimination among men and animals. The Holstein cow is just as much a natural product of the rank pastures and mild climate of the lands reclaimed by the Dutch from the North Sea, as is the Kerry cow of the heather-clad hills of Ireland. The American cayuse is nature's best effort to produce a horse upon the desert lands of the west, while no one could conceive of a Percheron very far from a big bin of oats and abundant roughage. The Jersey cow, when removed from her native isle, no longer picketed out, and given the range of a large and well-grassed pasture, always increases in size.

An Arkansas rooter, brought north and given conditions common to the corn-belt range and unlimited clover and corn, in the course of just a few generations, in spite of his degraded and aboriginal ancestry, would assimilate to the shape and type of the Poland China of the corn-belt. A parrot brought from Africa readily learns to swear in the English language. One parrot, years ago in New Zealand, some way found out that the kidney-fat of a sheep was a choice morsel, and as sheep increased in number in that country there developed a type of sheep-killing parrots; which, alighting on the back of the sheep, would tear the skin open and eat the fat around the kidneys.

The dog allowed to run wild very soon adjusts himself to his aboriginal environment and becomes gregarious like his prototype, the wolf, and, more curiously still, in a very few generations will take on the fawn-like color which distinguishes nearly all predatory and carnivorous wild beasts. The buffalo, if it could be domesticated, would in a short time become greatly modified in form. Its coat would grow less thick, its enormous forequarters would be reduced in size and its hindquarters enlarged. The need to be constantly fighting and on the run being removed, the power to fight and run would diminish. A black-walnut tree, which grows tall and straight on the rich, alluvial soil of a river-bottom, becomes little more than a scrub when the seed is planted on the top of some dry, sterile knoll.

If we turn to man, we find that the same conditions obtain. The native of the tropics, who lies down to sleep under a banana-bush and awaking reaches up and satisfies his hunger, then rolls over and goes to sleep again, never wants to do other than to sleep outdoors, wake up, reach, feed, and go to sleep. The northern man locating in the south, no matter if he is full of vim and energy in the north, inside of five years will lean up against a tree or fence and peacefully doze, while the weeds are running riot in his fields of corn and cotton, and indifferently "let things flicker" with just as little care as will his neighbor, the "poor white." Much of the energy and push which characterizes the man of the north is forced upon him by the pitiless alternative of working or of freezing and starving to death.

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Professions beget types of mankind. The man who works upon a railway, no matter in what capacity, always carries the railway brand with him and can be identified in a moment, while the western granger can hardly disguise the nature of his calling by any arts of dress—the brawny hand, the simple, honest look, and the too often ill-fitting suit invariably suggesting the toil of farm-life, the simple and candid ways of country folk, and the "ready-made" clothing stock. The Filipino, the Zulu, the North American Indian, the Hindoo, the Arab, Pat, who is always ready to fight at Donnybrook fair, my lord the English aristocrat, the lumberman, the miner, the commercial traveler, the politician, the sea-captain, each and all are the natural products of their environment.

The typical man of the west has not yet been evolved, but he is coming some day. He will be handsome physically—stalwart, energetic. He will represent also the best type of the world's intellectual development. His life will be shaped by science and fact, not by legend and superstition. He will deal with large things in a large way; will be a lover of the best in the home, in society, in politics, in business; be broad, generous, sympathetic, helpful. There are a few such men to be found today, and they are rearing boys of their type. The intemperate man, the cigarette-fiend, the lazy man, the dishonest man, the leech can never compete with this coming man, and they will go down in the struggle for supremacy. A western agricultural environment is the very best in all the wide world, and here will be reared the best type of the race.

The dreamer has done some work for the world! A hundred and fifty years ago there were some of these dreamers along the Atlantic Coast, in that narrow fringe of settlement where less than three million people lived. The wilderness was at their doors—communication was slow and difficult—Europe was six weeks away by sailing-vessel, New York and Philadelphia, though separated by but ninety miles, were two days apart; to Boston was a journey of a week even from points not far remote. In many places men still went to church fearful of Indian onslaught. And, yet, there were those who dreamed of empire; who thought the great British nation could be divorced; that old alliances and ties could be severed; that new principles of government could be established. They imagined that all men were born "free and equal." The world laughed at them.

But from behind the stone fences at Concord they spoke, at Breden's Hill they proclaimed it, and from New York to Yorktown they maintained it! And when Franklin, Jay, and Adams had concluded the treaty of peace at Paris, the diplomatists of Europe realized that the American revolution meant more than the severance of a colony from its parent state! France began to understand that the sequel was not, as it had been expected, the ruin of its ancient enemy, but that it implied the wreck of the Bastile, the triumph of the people, the end of bastard kings, of royal profligates, of pampered mistresses! Europe slowly awoke to the fact that the divinity that hedges kings was questioned, that the guillotine that could be invoked to chop off common heads might as readily fall on royal necks—that Louis XVI and Marie Antoinette died much as do other people!

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Then out of the centuries of oppression and of depression was produced a great transformation! The millions rolled like the waves of the sea against the ancient standards. France led, and the revolt did not end with Napoleon at Waterloo. It went on, until it swept away every shred of the corrupt court. It left no room for the feudalism that could permit the lord of the manor to treat his vassal as a slave.

Do you know that once in that old land a member of the nobility could shoot a tenant of his estate as he would a wandering fox, or that he could despoil him of his wife or daughter without redress? That a queen of that great nation could exclaim, when she heard that the people were starving for want of bread, "Why don't they eat cake?" That,while Parisian mobs were praying for food, the avenues of Versailles were covered with flour so that the court might enjoy a midsummer sleighride amid the imagined pleasures of winter? The dreamers of Europe and America put an end to this!

The wretched princelings who were ready to sell their subjects like chattels, the horrible inquisition of Spain, the rotten monarchies, all felt the blow! The revolution of 1830 in France was one evidence; the Reform Bill of 1832, in England, the breaking away of Italy from Austria, the rescue of Greece from Turkey; the abolition of the temporal power of the great church, the awakening of the Orient, the liberation of the slaves in '65, these, and a thousand more, are the fruition of dreams dreamed a hundred years ago.

They enlarged the horizon of men beyond the realization of philosophers and gave to human activities an unexpected scope. The son of the soil became the equal of the prince—knowledge, profession, statecraft, government, wealth advancement, everything was opened to him! The old bands and bars were overthrown, the old limitations removed. He no longer was the man with the muckrake; he could grapple the problem of the stars!

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The Far East was the early birthplace of the magicians. Its mysteries are sealed books. We may not know how many thousands of years ago the dreamers of its dreams led the people from the origin of the race upon Semitic plains through the passes of the Hamalayas to populate India; or west to what we now call Europe. We have no record of their conquest, except in the cuneiform inscriptions, the hieroglyphics upon the bricks of Egypt; the traditionary messages of the writings we call sacred. But after men began to record history—to preserve records—then we learn much.

And in the domain of religion, that sways our hearts and plays upon our emotions, think of the dreamers of Judea! Recall John, who came from the wilderness and in Bethabara—"beyond the Jordan"—proclaimed the Messiah to the critical and suspicious Pharisees! And Christ—the supreme dreamer, as he must have seemed to all his age, to his doubting countrymen, to the imperious Romans, to the refined Greeks—who could look into the future, and in the face of suffering and of ills, of scoffings and revilings, preach his appealing doctrine of universal love! What a dream it was!

(To be continued.)

AMONG the BOOKS

SIMON: "INFECTION AND IMMUNITY"

An Introduction to the Study of Infection and Immunity; Including Chapters on Serum Therapy, Vaccine Therapy, Chemotherapy and Serum Diagnosis. For Students and Practitioners. By Charles E. Simon, B. A., M. D. Illustrated. Philadelphia: Lea and Febiger. 1912. Price $3.25.

Dr. Simon has dedicated his book to Paul Ehrlich, the grand master of experimental medicine. It deals with the fascinating study of immunology, with the mechanism of infection and of organic defense, and with the various modes of biologic treatment and of chemotherapy, as also with the methods of biologic diagnosis that have been elaborated in the course of the last twenty-five years.

It is no longer permissible, even for older men graduated twenty and more years ago, to pass these subjects by. They must be studied, and must be studied closely, in order to enable us to give our patients the benefit of the best that modern medicine has to offer. Dr. Simon's book is presented as a guide for this study and affords all the necessary information, without too much detail and too much technical discussion.

WEBB: "HYPODERMIC MEDICATION"

Hypodermic Medication. By Frank Webb, M. D. With Prefatory Remarks by John Uri Lloyd, Ph. M. Boston: Therapeutic Publishing Company. 1912. Price $1.00.

This little book is based upon a series of articles by the author that were first published in *The Journal of Therapeutics and Dietetics*, these having been assembled and more fully elaborated. The discussion embraces a large variety of drugs that are more particularly employed by those of the eclectic school, but which physicians in general also have found useful.

While the injection, hypodermically, of the socalled "specific tinctures," or "specific medicines," is apt to be painful, Lloyd Brothers have succeeded in preparing a number of this class of remedies so as to deprive them of this objection, and these are recommended for use. The body is preceded by a chapter concerning the pharmacy of plant hypodermic remedies, contributed by Prof. John Uri Lloyd, which conveys considerable valuable information. Altogether, the little volume is decidedly interesting and useful.

LECOQ: "HYPODERMIC MEDICATION"

Manuel Pratique de la Médication Hypodermique. Par MM. les docteurs G. Bosc, Capdepont, Gillet, Mauté, Saissi, Tournade, Cottenot, et par L. Lecoq. First edition. Paris: Laboratoire d'Hypodermie. 1912.

This is a splendid manual of more than 300 pages, gotten out by a French pharmacist for the guidance of physicians. It describes the technic of the different methods of injection, such as hypodermic, intradermic, intramuscular, intravenous, epidural, and intrarhachidian injections, and discusses in the subsequent chapters the various combinations and uses of all medicines that are ever employed by this mode, even including bacterins and serums.

FLINT: "PHYSICAL DIAGNOSIS"

A Manual of Auscultation and Percussion; Embracing the Physical Diagnosis of Diseases of the Lungs and Heart and of Thoracic Aneurism and of other parts. By Austin Flint, M. D., LL. D. Sixth Edition, revised and enlarged by Haven Emerson, A. M., M. D. Illustrated. Philadelphia: Lea & Febiger. 1912. Price $2.00.

The publishers of this classical little book are to be congratulated upon their enterprise in having produced a timely revision of this manual, which has been of assistance to so many physicians in the course of many years. Dr. Flint's writings need no recommendation. His "Manual of Auscultation and Percussion" will continue to be a valued guide to the physician, and we wish it the same success it always has enjoyed.

LORAND: "RATIONAL DIET"

Health and Longevity Through Rational Diet. Practical Hints in regard to food and

the usefulness or harmful effects of the various articles of diet. By Dr. Arnold Lorand. Philadelphia: The F. A. Davis Company. 1912. Price $2.50.

Dr. Lorand is best known to us through his interesting work on "Old Age Deferred," which we were privileged to review some time ago. He vindicates the appearance of the present volume by saying that probably very few physicians have so frequently an opportunity to observe the harmful consequences of a faulty mode of nourishment as one who, like himself, is practicing as a Carlsbad balneologist.

It is a surprising fact that even scholars well versed in a large variety of subjects often display the sheerest ignorance or show the greatest carelessness precisely in respect to what and the manner in which they eat. Dr. Lorand not only is a close observer, but he commands an immense field of observation. He, further, has had practical experience in the dietetic management of manifold disorders; and, finally is an interesting and, attractive writer. The present volume forms a highly acceptable addition to our list of text books on the subject of dietetics.

REIK: "THE SPECIAL SENSES"

Safeguarding the Special Senses. General advise regarding the use and preservation of the eyes, ears, nose, and throat. By Henry O. Reik, M. D. Illustrated. Philadelphia: The F. A. Davis Company. 1912. Price 75 cents.

"It is probably safe to say that fifty percent of the practice of specialists is made up of efforts to correct conditions that should never have been permitted to exist. They are constantly crying to the family physician and to the public that prevention is not only cheaper, but easier and better than cure." This excerpt from the preface of this little book gives its *raison d'être*. It affords instruction in the prophylaxis of eye, ear, nose, and throat diseases, and as such undoubtedly carries in itself a complete vindication for its existence.

This is the kind of book that should be studied carefully by the general practitioner, in fact, much of its contents might well be memorized, because of the importance of the subject with which it deals.

HERTZLER: "SURGICAL OPERATIONS"

Surgical Operations with Local Anesthesia. By Arthur E. Hertzler, M. D. New York: Surgery Publishing Company. 1912. Price $2.00.

This is a most useful little work, describing those operations which can be carried on with the aid of local anesthetics, and in which it is not necessary to invoke what to many patients is the bugbear of inhalation anesthesia. The reviewer regrets that the author concludes that hyoscine should not be used, because of the uncertainty of its action upon the mental state of the patient, and, personally, not only from his own experience but from that of many other men, he takes the liberty to differ with the author on this particular point.

Otherwise, the reviewer has been impressed with the excellent treatment of the subject in hand, as also with the varied forms of operations that may be performed under local anesthesia. The technic is described concisely, aided by liberal illustrations. The various points in the author's argument are emphasized by marginal notes printed in red, a feature adding to the usefulness of the little book. It is cordially recommended to our readers.

PAGE: "GASOLIN AUTOMOBILES"

The Modern Gasolin Automobile; its design, construction, maintenance and repair. A practical, comprehensive treatise defining all principles pertaining to gasolin automobiles and their component parts. By Victor W. Page, M. E. Illustrated. New York: The Norman W. Henley Publishing Company. 1912. Price $2.50.

This book claims to give the most complete and up-to-date exposition on gasolin automobiles ever published, and to be of greatest value to motorists, students, mechanics, repairmen, automobile draughtsmen, designers and engineers, every phase of the subject being treated in a practical and nontechnical manner. It is an attractive volume of almost 700 pages, embellished with 500 specially made detailed illustrations and diagrams; the illustrations defining the construction of parts being made from accurate engineering drawings according to best automobile engineering practice. The reviewer is too thoroughly chained to his desk ever to have been tempted into the field of automobilism. Hence, he can form no opinion on the value of this book, but he has the impression that an immense amount of information may be gained from a study of its contents. The book can be obtained from the book department of CLINICAL MEDICINE. So if your

machine is balky or if you want to study its anatomy, send in your order.

THE JOURNAL OF VACCINE THERAPY

In the course of the last year the reviewer frequently has been interested in reading the excellent papers on vaccine therapy that appeared in *The Journal of Vaccine Therapy*, a publication which had been born into the world of medical journalism with the birth of the year 1912, and so it was with much regret that he read of the ill-health of the editor, Dr. R. W. Allen, which forced him to give up this work. However, it was a genuine pleasure to learn subsequently, through a personal communication from the publisher, that this monthly will be continued, and that Dr. W. d'Este Emery, who is widely known through his excellent work on "Immunity and Specific Therapy," will be the new editor. We congratulate the journal on having secured his services, and wish both the journal and Doctor Emery best success in the undertaking.

The Journal of Vaccine Therapy is published by H. K. Lewis, 136 Gower St., W. C., London, at the annual subscription rate of 10 shillings and six pence, post-free.

"STATE BOARD EXAMINATION QUESTIONS"

"State Board Examination Questions and Answers of the United States and Canada" is a practical work giving authentic questions and authoritative answers in full that will prove helpful in passing state-board examinations, every question being answered in full.

This is the fourth, thoroughly revised, edition of the well-known reprints from *The Medical Record*, former editions of which we have announced from time to time. The publishers are William Wood & Co., of New York. Price, $3.00.

THE PRESCRIBER

Those of our readers who are fortunate enough to receive *The Prescriber* regularly will not wonder at the decided liking the reviewer has expressed repeatedly for this splendid little journal, and to those who know the journal it will not be surprising that the journal appears with the new year in an enlarged form. Various excellent articles are promised for this year, for instance a series of papers on incompatibility in prescriptions from the prescriber's point of view. The January number contains the same interesting reviews and discussions for which the earlier volumes are so distinguished. The Prescriber is recommended cordially to physicians, in addition to whatever other journals they may take. The subscription price is only five shillings a year, post-free to any part of the world, and the completed volumes form excellent reference-books.

The reviewer acknowledges herewith the receipt of a bound copy of the sixth volume (1912) of The Prescriber.

THE BOSTON MEDICAL AND SURGICAL JOURNAL

The Boston Medical and Surgical Journal for November 28, 1912, claims, through *The New England Medical Journal* (the quarterly predecessor with which it was united in 1828), a continuous history of one hundred years. This century of existence is of interest. The first number of *The New England Medical Journal* was published in January, 1812. Other old medical journals of which the present writer has personal knowledge are *The American Journal of Medical Sciences*, *The London Lancet*, and the *Archives Générales de Médécine* (Paris), all three of which commenced publication in 1823 or very close to that date. All these journals, including *The Boston Medical and Surgical Journal*, not only still are in existence, but belong to the foremost and most important medical publications of the world.

We wish and predict for *The Boston Medical and Surgical Journal* many more years of fruitful and useful activity in the interest of the medical profession.

ROEMER: "OPHTHALMOLOGY"

Textbook of Ophthalmology, in the Form of Clinical Lectures. By Dr. Paul Roemer. Translated by Dr. Matthias Lanckton Foster. With 183 illustrations in the text and thirteen colored plates. Volume II. New York: The Rebman Company. Price $2.50.

This is the second volume of Roemer's "Textbook of Ophthalmology," the first volume of which was reviewed in these pages in the August issue, page 869. The present volume deals with diseases of the eyelids, with injuries to the eye, diseases of the vitreous and of the sclera, of the lacrimal organs, of the orbit, and with glaucoma, and muscular or concomitant strabismus.

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5887.—"Expectant or Active Treatment in Abortion. Anesthesia in Adenoid and Hemorrhoid Operations." F. C., Iowa, wishes to know whether in cases of abortion—second month—it is better to ignore the retained placenta, some temperature being present, or to remove it at once with a curette, saying: "I have always followed the latter course, but older practitioners disagree with me—and have even told patients that interference would cause trouble. My experience has been that it causes trouble to leave matters to adjust themselves."

He also asks what is the safe dosage of hyoscine-morphine-cactin for removing adenoids or tonsils in children four, six, and eight years old; and how administered. Also, as to dosage in removal of piles by cautery or injection method.

It seems to us that it would be extremely bad practice to leave shreds of placenta in the uterus. Jellett, in his "Manual of Midwifery," says:

"It should scarcely be necessary to condemn the expectant treatment, but, as some customs die hard, it is perhaps safer to do so. The expectant treatment was in the past usually adopted, even recommended by so great an authority as Winckle. Where part of the ovum was discharged the physician waited until one of three things happened, i. e., (1) the remainder of the products of conception came away, the termination devoutly hoped for, and when it occurred the advocates of the treatment pointed out how successfully they had avoided any intrauterine interference; (2) the ovum decomposed and evidences of sepsis presented; (3) patient lost as much blood from repeated hemorrhages as was considered safe.

"If the second or third termination occurred, the uterus was emptied, but, unless they occurred, the condition was allowed to persist. The natural result of such a line of treatment is that in a certain proportion of cases the remainder of the ovum or placental debris comes away spontaneously and the patient gets well; more often, however, intrauterine decomposition occurs, and the infection extends to the tubes, pelvic peritoneum or the connective tissue, and the patient becomes a chronic invalid or succumbs to sapremic intoxication.

"Such procedures must be absolutely condemned. The proportion of cases in which interference is not required is infinitesimal, and the longer it is postponed, the more difficult it is to carry out, owing to the closure of the cervix."

There are, it is true, some old-fashioned practitioners who allow "nature to take its course," because they are afraid to interfere, and it must be remembered that interference by an incompetent man decidedly increases the jeopardy of the patient. By all means, doctor, adhere to your present custom.

Adenoids and tonsils should rarely be removed under hyoscine-morphine-cactin anesthesia. Ethyl chloride, or, better still, ethyl bromide is the anesthetic of choice. A few whiffs of ethyl bromide produce unconsciousness, when the tonsils and adenoids can be removed in two minutes, the patient recovering from the anesthetic in time to expel the debris and blood. Were anesthesia prolonged, it would be difficult to prevent some of the blood from being swallowed or even drawn into the bronchi.

The writer's method is very simple and satisfactory. The patient is placed upon the lap of a nurse or assistant, the arms confined to the side with a wide bandage or towel, the head of the child resting against the nurse's shoulder. Ethyl bromide is given and anesthesia produced within one minute. A dilating mouth-gag is inserted

and the tonsils are excised. The child's head is advanced over a receptacle and the adenoids are removed with a Gottstein curette. Finally, the forefinger is inserted and swept around the pharyngeal vault, to ensure removal of all the growths. By this time the child is recovering. His head is still further inclined over the basin and he is encouraged to expel the blood. Should hemorrhage be at all excessive, an astringent gargle is given or the throat swabbed with adrenalin chloride or similar preparation.

Where children are extremely nervous, one-fourth of a hyoscine-morphine-cactin tablet or the one-half strength tablet (dosage depending, of course, upon age and condition of the child) may be given hypodermically one hour prior to operation. The little one then goes to the table free from dread and partially somnolent.

There is no necessity for using any anesthetic when injecting hemorrhoids, if the technic outlined herewith is followed:

Use a 50-percent solution of carbolic acid in olive oil. Have the tumors exposed, clean, and anoint them with carbolated vaselin; half-way between apex and base insert the needle till the point is in the center of the tumor; inject 5 to 10 drops of solution slowly; turn the point of the needle to the right and inject 2 drops; then to the left and inject 2 more. If the pile is now white and hard, withdraw the needle; if blood follows, reinsert and inject the unblanched portion; take five minutes at least to inject.

Treat the largest of several tumors first; attend to three at one sitting without fear; after injection, again anoint the piles and return them. Have the bowels kept closed for three days, and then open with a laxative saline or castor oil and, before the stool is voided, throw 4 ounces of oil, followed by 2 pints of hot water, into the bowel. Pain after operation rarely calls for an opium and hyoscyamine suppository. Use the best material; also a large needle.

The use of a strong solution, enough of it, and thorough distribution of the remedy throughout the hemorrhoid until it turns white or gray in its entirely are the main points. Bear in mind that some hemorrhoids contain two or more "pockets," and that any quantity of solution thrown in from one side will fail to effect a walled-off portion of the tumor elsewhere. In a case of this type remove the needle and reinsert it into the unaffected area, injecting drop by drop until this tissue also turns white. Should blood follow the needle on its withdrawal, make pressure with a wad of cotton for a minute; if the bleeding persists, you may rest assured you have not secured a firm coagulum and must reinject.

Always dilate the sphincter ani as a *first* step, and lubricate the parts thoroughly with carbenzol ointment. Confine the bowels for three days, then, before the patient has a movement, he should take a copious enema and after stool throw into the rectum an ounce of oil, to which 2 minims of carbolic acid may be added.

If the cautery is used, general anesthesia is essential.

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QUERY 5888.—"Eczema and Mushroom Poisoning." P. A. S., Massachusetts, has under observation a case which gives him trouble. "A healthy, well-developed woman of forty, married, in June last ate of mushrooms and asparagus at dinner and soon after became violently ill, vomiting freely; later, she developed erysipelas of the face, this leaving a butterfly-shaped area of an eczematous eruption covering both cheeks and the nose, which itches, is inflamed, and persists to date. Should not this trouble," he continues, "be treated with a compound of the active principles of asparagus and of mushroom, with perhaps an ointment to allay irritation, and maybe some constitutional attention besides? The poor woman has suffered many things of many physicians, and rather grows worse."

We regret to say that it is absolutely impossible for us to express an opinion as to the possible efficacy of asparagin and mascarine in the case under discussion. In the first place, as you are aware, asparagin is a diuretic, stimulant, and tonic to the mucosa of the urinary tract. Muscarine is little used and not thoroughly understood. The drug is a cardiac sedative and stimulant to the muciparous glands, particularly the salivary. It checks excessive perspiration.

It is a question, of course, whether the ingestion of asparagus has anything to do with the present symptoms, and we do not know the variety of mushroom the patient ate. There are a large number of edible fungi, but idiosyncrasy in the individual or injudicious consumption may give rise to untoward effects, and even death, from the use of perfectly identified edible mushrooms.

We need not tell you that the toxic effects of mushrooms are due to the presence of muscarine, present in agaricus muscarius, and to phalline, contained in amanita phalloides and some other varieties. The fly-

amanita (muscaria) and death-cup (amanita phalloides) are fungi that most often cause poisoning.

The symptoms of muscarine poisoning are mostly of cerebral origin. Within thirty minutes after the ingestion, giddiness is experienced, with nausea and salivation; then follow vomiting, diarrhea, severe cramps, dimness of vision, distressing dyspnea. The patient often appears drunk and extremely excited, then becomes drowsy, and convulsions preceded often by anuria make their appearance later. The pulse is slow and thread-like at this time, while the pupils, which at first were contracted, become dilated before death. The reflexes are abolished, and cold sweats appear. Death occurs either in the middle of the convulsions or during coma.

Out of six individuals poisoned by the agaricus muscarius, three died; one on the first, one on the second, and one on the third day after the meal. The fatal portion in each instance was a small one, being, in two cases, one-half of a medium-sized mushroom, and, in the third case, about one-sixth.

Phalline does not act on the heart, as does muscarine, but tends to dissolve the blood-corpuscles, thus bringing about a condition resembling cholera. Cramps in the abdomen and lower limbs are exceedingly severe; rice-water stools are voided every few minutes; vomiting, collapse, cyanosis, and muscular contraction, not infrequently convulsions, follow one another in rapid succession.

As will be seen, the symptoms differ entirely from those caused by muscarine. Death occurs in from two to four days, the patient toward the end sinking into a somnolent condition, due to carbonic-acid poisoning. The prognosis here really is less favorable than in muscarine poisoning, and, unfortunately, there is no known antidote for phalline. Still, if the quantity of the poison in the system is not too large, it may wear itself out in the blood and the patient recover.

We question whether the "erysipeloid" condition now troubling your patient is a result of mushroom poisoning, and think you may also safely exclude asparagus as a provocative agent. Have the patient's blood and urine examined. See whether there is any nasal or pharyngeal infection. What about the temperature? You might advantageously push calcium sulphide and nuclein, with perhaps pilocarpine in small doses; also apply carbenzol, 1 dram, and echinacea, 1 dram, in lanolin and vaseline, 1 ounce. We would also be inclined to give echinacea internally in rather full doses.

These are merely suggestions. In order to treat the patient intelligently, the basal pathologic conditions must be ascertained. We should be inclined to suspect lupus erythematosus. The situation and configuration of the lesion, burning or itching are almost diagnostic. Undoubtedly you have access to Stelwagon's "Diseases of the Skin." Note figures 153, page 714, and plate xx. It is just possible, of course, that the initial changes in the corium and blood-vessel are due to the presence of some toxin in the blood. Do not forget that ichthyol has proven extremely efficacious in lupus erythematosus; it should be applied locally and given internally in doses of 10 minims three times a day.

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QUERY 5889.—"Dropsy During Pregnancy." E. P. P., Michigan, requests treatment for woman 26 years of age, weight 140 pounds, pregnant for the first time and eight months advanced. Her face, legs, and feet are badly bloated (one leg twice its normal size); some bloating also on the body. The urine, scant in quantity, has a specific gravity of 1040 and is loaded with albumin. She has been given potassium acetate, lithia, hydrangea, and eupurpurin.

The patient is in a serious condition, and it may be necessary to terminate pregnancy. You may give pilocarpine to advantage; also push arbutin, 1 grain, every three hours.

We should not hesitate to put the patient in a wet-pack, and you certainly should give laxative salines so as to insure two or three bowel movements each day. True, there is quite a difference among clinicians as to the frequency of albuminuria during pregnancy. Some observers claim that this condition obtains in one out of every five or six women; Jellett says that he has observed 30 percent so affected; while Barker and Parvin, with equal facilities for study, have found albumin in excess only in 4 percent of pregnant women.

It must be remembered that a woman suffering from chronic nephritis may become pregnant or also a pregnant woman may contract ordinary acute nephritis from any of the usual causes. In addition to the possibilities to be considered, we also have to bear in mind the typical "kidney of pregnancy," which may present any one of the following clinical pictures, viz.:

(1) The symptoms of subacute nephritis showing here during the later months, persisting until delivery, then passing off after-

ward, never to recur. (2) Relapsing nephritis, in which albumin (often with casts) is found after the fourth or fifth month of pregnancy, disappearing after delivery, but returning again with each subsequent pregnancy. We ought then to differentiate between socalled "kidney of pregnancy" and nephritis proper. Albuminuria in the former case may be due to the increased work placed upon the kidneys or else to direct irritation from blood changes. (3) Pressure on the renal veins, causing congestion of the kidneys, which gives rise to conditions similar to those in congestive albuminuria of cardiac origin. (4) Pressure by the gravid uterus upon the ureters. (5) Anemia, due to spasm of the renal vessels produced by reflex stimuli from the reproductive organs. (6) A similar anemia due to occlusion of the small renal vessels by minute emboli that have their origin in some ferment in the blood or come direct from the placenta.

Treatment, evidently, to be effective, must be based upon a correct conception of the conditions present. If you will send us a specimen of the patient's urine we can, perhaps, state better whether you have to do with "kidney of pregnancy" or nephritis proper. Anasarca and albuminuria there certainly are, but you do not say anything about casts. The output of urine, we need not point out, generally is decreased in subacute or acute nephritis and increased in chronic nephritis; but here, again, socalled "nephritis of pregnancy" is marked by a reduced output.

All the nephritic symptoms, as everyone understands, are aggravated by pregnancy: the quantity voided steadily diminishes, the amount of albumin increases, specific gravity becomes lower; there is diminution in the output of urea, digestion is disturbed, headache and vomiting are observed, there is disturbance of vision, general weakness, drowsiness; and at last twitching of the muscles or of the limbs—even convulsions—may usher in uremic coma. The eye-symptoms are especially important, particularly when the gradual failure of vision is accompanied by steady diminution in the quantity of urine voided. Under such conditions pregnancy is liable to terminate prematurely, the fetus dying in the womb or immediately after birth.

Albuminuria alone will call for a regimen of simple purgatives. The patient's diet should be light. Red meat must be excluded. Chicken and fish, however, may be allowed in small quantities once daily. Soups and meat-extracts are forbidden. If from former experience with the individual or from the symptom-complex the presence of nephritis is to be inferred, the diet should be restricted to milk and farinaceous foods. Free purgation should be secured every second or third day.

In the present instance we should insist upon an absolute milk diet, giving two or three quarts daily. Digitalin and scillitoid may be given in dose enough to secure free diuresis, and if the arbutin, as already advised, is given, 1-64 of each every three hours probably will suffice. In other words, doctor, you must secure elimination—renal, intestinal, and by the skin; if necessary even placing the patient in a pack every other day, pushing pilocarpine to free diaphoresis. Should the patient show symptoms of an oncoming uremia (the urine suppressed, heart action becoming uncertain, dyspnea, vomiting, mental dulness, failing vision), the question of inducing premature labor must be considered; and, if such a course is necessary, this should be done with the least possible delay.

Bear in mind, though, that, when nephritis exists only during pregnancy and all the symptoms arising during the later months, it is rarely necessary to induce premature labor; in fact, French *accoucheurs* state that this should never be done, operation being more dangerous than eclampsia itself. We, ourselves, however, are inclined to believe that this is an extreme position and that artificial interruption of pregnancy is justified if, in spite of the institution of a restricted diet and proper medication, the symptoms steadily become more serious. It seems that you have no time to lose in this instance.

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QUERY 5890.—"Female Sterility and Artificial Impregnation." G. L. M., New Jersey, who is "becoming a great advocate of your principles of medication, having found them 'cracker jacks,' and expects to extend their use," asks "what medication, if any, will overcome sterility in a woman married over three years without having children or showing indications of being pregnant."

We regret that it is absolutely impossible, with our limited knowledge of the conditions obtaining, to offer any effective suggestions in your case of supposed sterility. Thoroughly examine the woman. See whether there is any marked displacement of the uterus or constriction of the cervical canal. After that, give the male your serious attention. Many a poor woman is accused of sterility when, in truth, the husband is at fault. The semen should be examined, and

the existence of an early gonorrhea ascertained or definitely excluded.

Let us remind you of the conclusion long ago arrived at by Gerard, viz.: (1) that every normal woman whose husband has normal spermatozoa is justified in resorting to artificial impregnation, if she has been married two years and has no children; (2) every woman with an uncured catarrh (vaginal) is so justified, the semen thus being carried beyond the reach of harm; (3) every woman with uterine deviation, without inflammation, when postural instructions have not resulted favorably. The Gerard apparatus is somewhat complicated, but we now know that it suffices to secure and immediately introduce the semen into the uterine cavity, then closing the cervical canal with a tampon. Great care must be taken to prevent the introduction into the uterus of vaginal discharge.

As a rule, however, artificial impregnation is not necessary. With the correction of any abnormality in the female, some instruction with regard to posture, and a few other details, usually suffice, provided (as already pointed out) that the semen of the male contains normal spermatozoa.

In this connection we suggest that you procure Sturgis's articles, which appeared in *The Medical Council* of 1911, and are now obtainable in book form. Several other works have recently appeared dealing with this and kindred topics, which would be of interest to you. Among them, Kirsch's "Sexual Life of Woman" and Talmey's "Woman." The Index Catalog of the Surgeon-General's Library (Vol. XVI, 2nd series) contains 6 pages of references on sterility of the female.

If you have been reading CLINICAL MEDICINE, you have, of course, noticed Robinson's articles which appeared at intervals during the past year. Sterility in the male there has received particular attention.

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QUERY 5891.—"Mullein Oil for Partial Deafness." J. R., Texas, asks whether anything can be applied locally to the ear to relieve partial deafness. He explains that he has no faith in ear specialists. As to the latter declaration, we may say that a competent aurist will at least be able to discover the cause of the trouble, while also he might be able to cure or give relief.

Under the conditions, you may try, with safety, mulleined oil; in some ear affections, especially in partial deafness due to dryness of the tympanum or catarrhal conditions, it has proven efficacious. It is not easy, though, to secure a reliable preparation, hence the suggestion that you order Lloyd's preparation (or get direct from Lloyd Brothers, Cincinnati), an ounce-vial of it. In cold weather the oil solidifies; when the vial should be set in water and warmed. Not more than one drop should be placed in the ear.

The auditory canal should be syringed every second or third day with warm decinormal salt solution. If there is any deposit of wax, drop in first a few minims of hydrogen peroxide solution. After foaming ceases, flush the ear with the salt solution, dry with pledget of cotton wrapped on a toothpick, then introduce the mullein oil.

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QUERY 5892.—"Cerebrin and Cholesterin." A. N., Iowa, wishes to know what the "new products" cerebrin and cholesterin, discovered by an English chemist, are used for.

These two substances are not exactly "new," having been before the profession for some time. Cholesterin is secured from the gall and brain of animals, and from vegetable fats. It occurs in the form of white pearly scales; is soluble in ether, chloroform, and hot alcohol, but only slightly so in water, though the latter can be absorbed to the extent of 200 percent. Taken internally, it exerts an antiseptic action, and also is an antidote to the saponins.

Cerebrin is a nitrogenous, phosphorus-free proximate principle from brain-substance, occurring in the form of a yellowish-white crystalline powder. It possesses only physiological interest.

Protagon, another physiologic preparation from the brain, contains phosphorus. It is a white powder soluble in alcohol and in ether.

Cerebrum, the dried and fat-free gray brain-substance of the calf (one part representing five parts of the fresh organ), is indicated in neurasthenia, chorea, agoraphobia, psychoses, and so forth.

Besides those named, there are on the market several cerebral extracts which are more or less effective. Remember lecithin.

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QUERY 5893.—"Soft Corns." H. K., Wisconsin, has a patient who for a number of years has had a "soft corn" between the little toe and its neighbor. The corn was caused by a bruise.

It is a question whether you really have to deal with a true corn (clavus) or a callosity (tylosis). Frequently a hard epidermic patch

will be noted between the toes, the thickened epidermis becoming softened by the secretions natural to the part. Inflammatory symptoms do not often make their appearance in these growths, although occasionally the subjacent corium may become inflamed; which, however, disappears spontaneously when the pressure or other external irritation is removed.

We suggest that you soak the toes for some time in hot water containing 1-2 ounce of sodium carbonate or of borax to the gallon. Scrape away the thickened epidermis, then apply salicylic-acid collodion or a 10-percent salicylic-acid rubber plaster, keeping this on for several days or a week, remove, bathe again, and rub away the hardened layer. Then protect the parts with ordinary adhesive plaster and place a wad of cotton dusted with a little zinc stearate between the toes. Sometimes the plaster is not necessary, the cotton and zinc stearate sufficing.

If you have a true corn to deal with, nothing equals the following: Salicylic acid, dr. 1; extract of cannabis indica, grs. 20; flexible collodion, dr. 1; plain collodion, dr. 1. Apply this to the corn, night and morning, for several days, then soak the toes in hot water and carefully remove the keratified layers by rubbing or scraping. If the flesh is tender, treatment should be discontinued for a few days, and then the painting resumed. Several repetitions usually are necessary.

Lactic acid also has given us good results. Apply pure, carefully, and after fifteen minutes remove the softened epidermis by scraping. Then apply carbenzol ointment with thuja, 60 minims to the ounce.

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QUERY 5894.—"What is meant by 'Giving to Effect'?" N. T., South Carolina, who is using the active principles, wants us to explain what we mean when we advise giving the triple arsenates with nuclein "to effect." He asks further: "Why are these arsenates given after meals? Will not the fats in the food counteract the effect of the strychnine, and will not the iron be converted into insoluble tannate by the tannic acid in the vegetables ingested? What is the physiological effect of nuclein?"

We confess that we are rather startled at the nature of your questions. Certainly you must be aware that arsenic in its various forms usually is given after food in order to prevent irritation of the gastric mucosa. We do not quite see how the grease ingested by the patient with meals could counteract the effect of strychnine (although we are aware lard has been used as an antidote for strychnine poisoning in dogs); nor is it at all likely that any tannic acid present in vegetables will cause the iron present in the triple arsenates to be converted into the insoluble tannate.

The expression "to effect," in connection with the ingestion of strychnine, does not mean that control of the legs should be lost as an effect of the drug, nor even that full signs of strychnine-sufficiency be evident in the subject (though it might under certain circumstances be permissible to push strychnine to that extent, that is, until slight twitching of the muscles, redness and smarting of the eyes, and other evidences of strychnine "sufficiency" are observed), but rather giving it until benefit results. Nuclein is a reconstructant, vitalizing tonic, and the combination of the arsenates of iron, quinine and strychnine with nuclein is indicated wherever it is desirable to improve systemic "tone" or generally exert a tonic-alterative effect. Some of the salts of strychnine (the sulphate, for instance) are best given for prompt effect upon an empty stomach, but arsenic or the arsenates should preferably be taken with or after meals.

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QUERY 5895.—"The Oxypathor." M. H. R., California, has had his attention called several times lately to the results obtained by the oxypathor. He asks: "Have you ever taken an oxypathor apart and determined what produces the results they claim to get from its use?"

If you will write to *The Journal of the American Medical Association*, and enclose ten cents in stamps for postage, you will receive a copy of that publication containing an exposure of the electropoise, oxydonor, oxypathor, and similar appliances.

The electropoise, Sanché's original instrument, contained a combination of black lead and charcoal. The oxypathor is a more modern affair, but based upon Sanché's idea, which is to connect the body with the earth, or water at a lower temperature. His first patients had fastened to either ankle or wrist one end of a dampened cord; the other end of which was attached to an old plow-point, buried in moist earth. As is so often the case with such things, there is a molecule of truth in Sanché's theory, but the various high-priced appliances on the market are not at all essential. We have never examined an oxypathor or read the literature of the concern vending this appliance.